**2014-1066, -1067, -1068, -1069, -1070**

# United States Court of Appeals for the Federal Circuit

IN RE PACTIV LLC

*Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. 90/010,976, 90/011,128, 90/011,130, 90/011,131, and 90/011,132.*

## BRIEF FOR APPELLANT

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FEBRUARY 4, 2014

# CERTIFICATE OF INTEREST

Counsel for the Appellant, Pactiv LLC, certifies the following (use "None" if applicable; use extra sheets if necessary):

1. The full name of every party or amicus represented by me is:

Pactiv LLC

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

None

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

Reynolds Group Holdings Inc.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

John C. Gatz, Nixon Peabody LLP
Joey C. Yao, Nixon Peabody LLP
Daniel H. Shulman, Reynolds Group Holdings Ltd.

February 4, 2014

/s/ Daniel H. Shulman
Daniel H. Shulman
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## STATEMENT OF RELATED CASES

There are no related appeals in any appellate court. This Court's decision will affect Civil Action No. 1:10-cv-00461 (*Pactiv LLC v. Multisorb Techs., Inc.*) in the United States District Court for the Northern District of Illinois, wherein each of the reexamined patents has been asserted.

## JURISDICTIONAL STATEMENT

The Patent Trial and Appeal Board (PTAB) had jurisdiction pursuant to 35 U.S.C. § 306. The PTAB's decisions on August 15 and 16, 2013 were final determinations of the status of the claims in the *ex parte* reexaminations of U.S. Patent Nos. 6,183,790; 5,698,250; 5,948,457; 5,811,142; and 6,231,905.[1] Notices of Appeal were timely filed on September 25, 2013. This Court has jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

[1] Hereinafter the 790 patent, the 250 patent, the 457 patent, the 142 patent and the 905 patent.

## STATEMENT OF THE ISSUES

1. Every rejection affirmed by the PTAB in these *ex parte* reexaminations was based on art that did not form the basis of a substantial new question of patentability. *Belkin Int'l, Inc. v. Kappos*, 696 F.3d 1379 (Fed. Cir. 2012) prohibits rejections of claims in *inter partes* reexaminations based on art that did not form the basis of a substantial new question of patentability. Does *Belkin* apply equally to *ex parte* reexaminations and therefore mandate reversal?
2. A reference used to reject every appealed claim includes observations relied upon by the PTAB that are at odds with the data presented in the reference and, if true, would violate known scientific principles. Nonetheless, the PTAB credited those unreliable statements over the testimony of the inventor and an expert to find the claims obvious. Was the PTAB's reliance on those statements rather than the data they were interpreting supported by substantial evidence?
3. The present inventions sought to reduce oxygen concentrations at a rate necessary to prevent a chemical reaction in red meat that would turn meat brown. The PTAB

relied on art directed to oxygen scavengers that reduced oxygen quickly in other applications, but which contained no actual rate data, to support an obviousness rejection. Was the PTAB's reliance on such art for motivation to combine supported by substantial evidence?

4. Did the PTAB err when it gave virtually no weight to (i) a nearly twenty year need before invention (despite the components being available), (ii) industry adoption of the claimed invention, and (iii) experimentally documented, unexpected results of the claimed invention, to support non-obviousness?

## STATEMENT OF THE CASES AND PERTINENT FACTS

### I. The Cases On Appeal

This is a consolidated appeal of the PTAB's decisions affirming the Examiner's rejections in *ex parte* reexaminations of five patents.[2] (JA0001-98; JA0130-84.) In Final Office Actions dated September 28 and 29, 2011, the Examiner rejected the following

[2] The patents relate to the following reexamination control numbers: 90/010,976 (the 250 patent); 90/011,130 (the 142 patent); 90/011,131 (the 457 patent); 90/011,128 (the 790 patent); and 90/011,132 (the 905 patent). Reference will be made to the patent numbers rather than control numbers.

claims under 35 U.S.C. § 103(a): claims 1-7, 9-24, 27 and 30 of the 250 patent (JA1146-56); claims 1-15 and 21 of the 142 patent (JA2790-94); claims 1-7, 9-11, 13-17 and 20-23 of the 457 patent (JA1952-58); claims 1-7, 9 and 10 of the 790 patent (JA3409-16); and claims 1-22 of the 905 patent (JA0560-68).

On December 28, 2011, Pactiv appealed the final rejections to the PTAB. (JA0648; JA1244; JA2038; JA2872; JA3492.) On August 15 and 16, 2013, the PTAB affirmed most of the Examiner's rejections and reversed others. (JA0001-98.) Pactiv filed its Notices of Appeal on September 25, 2013. (JA3809-10; JA3831-32; JA3871-72; JA3891-92; JA3912-13.)

## II. Background Facts And Technology

The 790 patent, the 142 patent and the 457 patent claim priority from the 250 patent, filed April 3, 1996. (JA0154; JA0164; JA0175.) The 905 patent, filed October 8, 1998, does not claim priority to any of the other four patents. (JA0130.) The patents are directed to modified atmosphere packages (MAPs), methods of manufacturing a MAP, and methods and systems for removing oxygen from a MAP. (JA0130-84.) The claimed MAPs are specifically designed to extend shelf life of raw meat. In particular:

> [T]he present invention is directed to a new and improved modified atmosphere package for extending the shelf life of food, especially raw meats. Moreover, the present invention is directed to a new and improved modified atmosphere packaging system for producing the foregoing packages which operates at significantly higher speeds than prior art systems and which reduces the oxygen level in the packages without the use of time-consuming evacuation techniques. The packaging system effectively extends the allowable time period between cutting and purchase of retail cuts of raw meat. The raw meat can be cut and packaged several weeks prior to being purchased at the store and yet remains fresh during this time period.

(JA0150, 2:23-35.)

In an embodiment from the 250 patent, the invention includes an inner container, an outer container and an oxygen scavenger activated with an activating agent. (*See* JA1295 ¶ 4; *see*, *e.g.*, JA0151, 3:20-22, 4:21-45.) The inner container contains a retail cut of raw meat packaged in a polymeric material substantially permeable to oxygen. (JA1295 ¶ 4; *see*, *e.g.*, JA0151, 3:20-52.) The outer container comprises polymeric material substantially impermeable to oxygen. (JA1295 ¶ 4; *see*, *e.g.*, JA0151, 4:5-18.) The oxygen scavenger is activated with an activating agent and positioned external to the inner container to substantially absorb

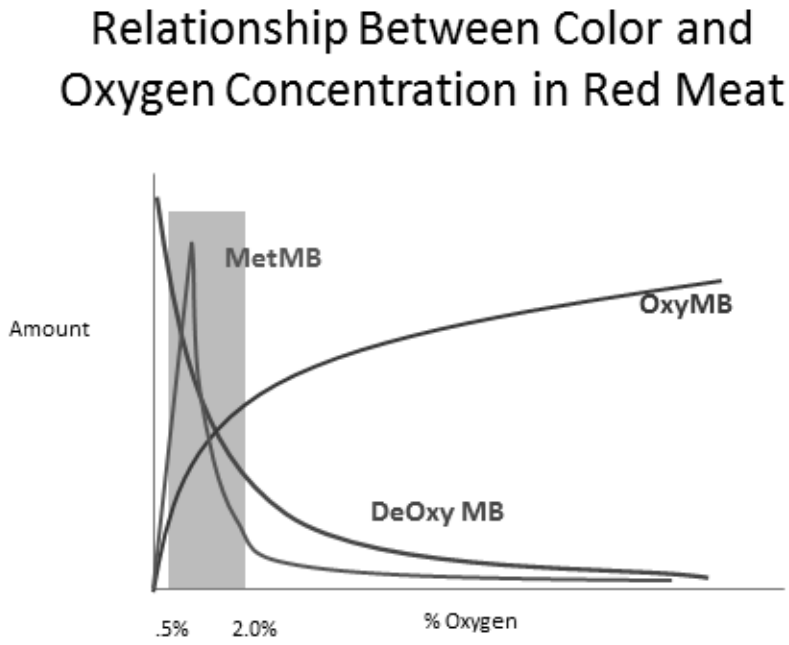
residual oxygen within the MAP. (JA1295 ¶ 4; *see*, *e.g.*, JA0151, 4:21-45.)

The present inventions maximize the shelf life of retail cuts of raw meat by reducing or inhibiting premature browning of the meat. (JA1295 ¶ 5.) The rapid reduction of oxygen levels within the package preserves the meat chemistry in the package and allows the meat to bloom to a bright red color when exposed to air, such as in a retail display. (JA0170, 1:67-2:5; JA0171, 4:52-54.)

As described in detail below, the *problem facing the inventors was the need to rapidly reduce oxygen levels in a package of raw meat to prevent irreversible chemical changes that would turn the meat an unsaleable brown color*.

### A. Relationship Between Color And Oxygen Concentration In Red Meat

Red meat includes three color influencing chemicals: metmyoglobin (MetMB), which produces brown; oxymyoglobin (OxyMB), which produces bright red; and deoxymyoglobin (DeOxyMB), which produces a purplish hue. The relationship between color and oxygen concentration in red meat is represented graphically below:




(*See*, *e.g.*, JA0139-40, 2:65-3:16.) As shown, the growth of metmyoglobin (brown) increases substantially in the area between 0.5% and 2.0% oxygen, whereas the growth of metmyoglobin outside of that range is relatively slow. (*Id.*) Therefore, it is important to spend very little time in the metmyoglobin-forming range (0.5% to 2.0%) to maintain pigment quality. The longer the meat is in the metmyoglobin-forming range, the browner it becomes. Thus, even moderately low oxygen environments (*i.e.*, 0.5% to 2.0% oxygen) are not sufficiently low to prevent browning. And, techniques to reduce oxygen levels below 0.5% are insufficient

unless they rapidly move the oxygen levels through the 0.5% to 2.0% region.

### B. Metmyoglobin (Brown) Does Not Turn To Oxymyoglobin (Bright Red) On Exposure To Environment

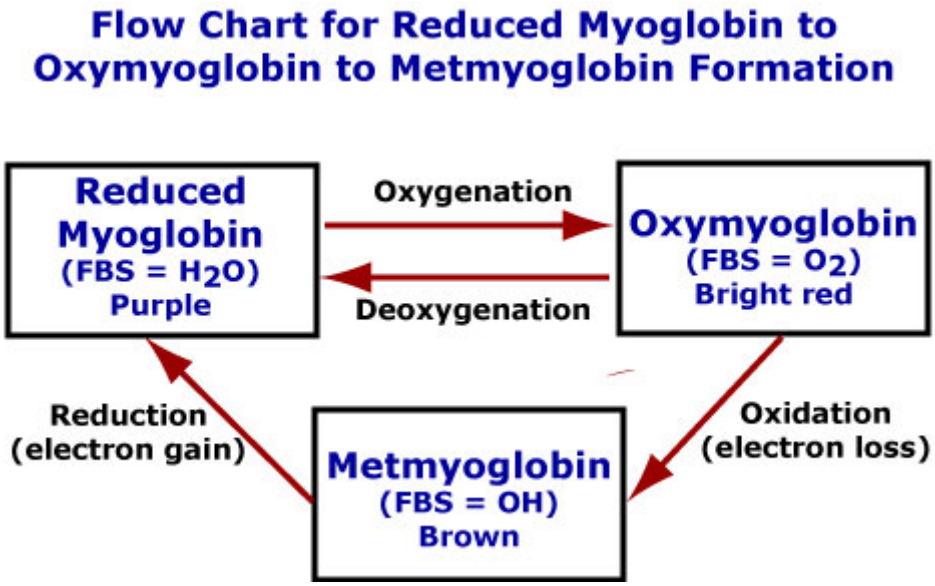
The importance of removing oxygen quickly is detailed in the following passage of U.S. Patent No. 5,928,560:[3]

> It is critically important to quickly remove the oxygen from meat to prevent it from turning brown. Especially important in preventing the irreversible change from red to brown is the rate at which oxygen is scavenged. If oxygen is removed quickly, the packaged meat turns a purple red color. This purple red color quickly "blooms" to a bright red color upon removal of the outer layer of packaging.

(JA1319, 2:32-39.) This is consistent with the understanding of those in meat science that metmyoglobin (brown) will *not* turn to oxymyoglobin (bright red) upon exposure to the environment. (*See id.*) The following chart shows the relationship among metmyoglobin, deoxymyoglobin (also known as reduced myoglobin),

[3] U.S. Patent No. 5,928,650 (JA1308-25), to the same inventors as the patents here, and filed the same year as the 250 patent, illustrates the problem to be solved at the time of invention.

and oxymyoglobin. (*Id.*, 2:26-39; JA0170, 1:67-2:5; JA3797, 1:17-62.)




"Blooming" does not refer to metmyoglobin (brown) turning to oxymyoglobin (red), but rather refers to deoxymyoglobin (purple) turning to oxymyoglobin (red). (*See* JA1319, 2:26-39.) Once the metmyoglobin is formed, an oxygen absorber will *not* reverse this pigment.[4] (*Id.*)

[4] Enzymes in meat may reduce the amount of metmyoglobin over days or weeks. The amount of enzymes in meat can vary significantly, and thus enzymes are unreliable for reducing metmyoglobin once formed.

### C. Prior Techniques For Preserving Color

Prior methods of preserving retail cuts of raw meat have utilized either high or low oxygen concentrations. (JA1295-96 ¶ 7.) Packaging systems that provide extremely low levels of oxygen are preferable because fresh meat can be preserved longer under anaerobic conditions. (*Id.*; *see* JA0150, 1:36-39.) However, achieving low concentrations of oxygen in packaging of retail cuts of raw meat needs to be done in hours – not several days, weeks or months – to avoid forming metmyoglobin. (JA1295-96 ¶ 7.)

Packaging systems that only use oxygen evacuation techniques to reduce oxygen content are undesirable because (a) "such systems operate at exceptionally slow speeds because they require the use of an evacuation device along the packaging line;" and (b) "evacuation techniques render it difficult to remove any oxygen within a previously wrapped package such as an overwrapped meat tray." (JA1296 ¶ 8; JA0150, 2:3-12.) Specifically, packaging systems that only use oxygen evacuation techniques cannot remove trapped oxygen that diffuses from foam trays, as are used in some meat packaging systems. (JA1296 ¶ 8.) Foam trays have substantial amounts of oxygen contained in their cellular

structure, taking as long as about five to six days to diffuse that oxygen out. (*Id.*)

## III. The Prior Art Rejections

The PTAB affirmed rejections of the relevant claims on essentially two grounds:

- Ground I: Under 35 U.S.C. § 103(a) as obvious over Patent No. 3,574,642 to Weinke ("Weinke") (JA3736-40) in view of JP 58-158129 to Sakai ("Sakai") (JA3712-21) and GB 1,556,853 ("GB 853") (JA3710-11)[5]
- Ground II: Under 35 U.S.C. § 103(a) as obvious over Weinke in view of Sakai and EP 468,880 to Hamon ("Hamon") (JA3684-99)[6]

### A. The Prosecution History And Appealed Claims

*Ex parte* reexaminations were requested of each of the patents based on various prior art combinations. (JA0369; JA0920; JA1771; JA2631; JA3229.) In each case, the Director indicated at

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[5] All of the pending claims were rejected at least on Ground I.

[6] The following claims were rejected on Ground II in addition to Ground I: 250 patent: 1-11 and 23-24; 905 patent: 1-22; 790 patent: 1-7 and 9-10; 457 patent: 1-4, 6, 7, 9-11, 13-14 and 16; 142 patent: 1-4 and 6-9.

least one substantial new question of patentability ("SNQ") existed.[7] (JA0376-95; JA0946-56; JA1795-1824; JA2692-2709; JA3231-43.) Subsequently, in each case, a First Office Action issued rejecting one or more claims based on prior art. (JA0424-35; JA1005-18; JA1830-40; JA2677-91; JA3246-57.)

Each of the appealed claims was initially rejected under U.S. Patent No. 4,399,161 to Nakamura (JA3758-63) and/or Weinke, alone or with some other reference. (JA0428-32; JA1008-15; JA1834-38; JA2681-88; JA3250-3255.) Subsequent to those First Office Actions, a response was filed. (JA0447-509; JA1019-37; JA1069-76; JA1848-1910; JA2725-55; JA3293-3350; JA3365-68.) After an interview was conducted on all five cases (JA0520-23; JA1086-89; JA1925-28; JA2768-70; JA3378-80), a Supplemental Response to First Office Action was filed in each case. (JA0524-45; JA1090-1131; JA1929-42; JA2771-79; JA3381-93.) The Supplemental Responses added the limitation "predetermined amount" to characterize the amount of activating agent used to

[7] Details concerning the precise SNQs are presented in Statement of Cases and Pertinent Facts, Section IV, *infra*. Because the SNQs did not form the basis of any rejections, they will not be addressed further here.

activate the oxygen scavenger. (JA0524-34; JA1090-1104; JA1929-38; JA2771-79; JA3381-88.)

Each of the relevant claims was finally rejected on one or more of the following three grounds: (a) § 102 over EP 698,563 A1 to Mize ("Mize") (JA3700-3709); (b) Ground I above; and (c) Ground II above. (JA0560-68; JA1144-56; JA1951-58; JA2788-94; JA3408-16.) Pactiv appealed the rejections to the PTAB. (JA0648; JA1244; JA2038; JA2872; JA3492.) In response, the Examiner withdrew the rejections over Mize, but maintained the others. (JA0803-19; JA1402-21; JA2192-2207; JA2967-79; JA3584-98.) The PTAB affirmed the Examiner's rejections on Ground I. (JA0007-17; JA0028-53; JA0060-69; JA0076-86; JA0094-97.)[8] The PTAB affirmed the Examiner's rejections on Ground II on selected claims and reversed the rejections on Ground II on other claims. (*Id.*)

Pactiv has selected five representative claims to discuss on appeal: claims 1, 3 and 21 of the 250 patent, and claim 4 and 13 of

[8] The five appealed PTAB decisions are nearly identical. Unless otherwise noted, citation will be made to the decision concerning the 250 patent.

the 142 patent. Those claims (marked to show changes from original) are:

### 1. Appealed Representative Claims Of The 250 Patent

1. (Twice Amended) A modified atmosphere package, comprising:

an inner container comprised of a polymeric material substantially permeable to oxygen, said inner container being configured and sized to fully enclose a retail cut of raw meat;

an outer container comprised of a polymeric material substantially impermeable to oxygen, said outer container enclosing said inner container, said inner container being removable from at least a portion of said outer container without destroying said inner container, said inner container being differently shaped than said outer container, said outer container being substantially free of oxygen therein in response to said outer container being flushed with one or more gases creating a modified atmosphere within said outer container, the outer container including a polymeric bag; and

an oxygen scavenger activated with [an] a predetermined amount of activating agent and positioned external to said inner container to substantially absorb residual oxygen within the modified atmosphere package.

3. (Original) [The modified atmosphere package of claim 1, wherein said inner container includes a tray and a cover, said cover being engaged to said tray to form said inner container],[9] wherein said tray is comprised of polystyrene foam.

21. (Twice Amended) A method of manufacturing a modified atmosphere package, said method comprising the steps of:

supplying an inner container comprised of a polymeric material substantially permeable to oxygen;

placing a retail cut of raw meat within said inner container;

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[9] Incorporating claim 2, from which it depends.

sealing said inner container;

supplying an outer container comprised of a polymeric material substantially impermeable to oxygen;

inserting said inner container into said outer container without sealing said outer container, said inner container being removable from at least a portion of said outer container without destroying said inner container and being differently shaped than said outer container;

substantially removing oxygen from said outer container, without evacuating said outer container, by flushing said outer container with one or more gases;

sealing said outer container;

supplying an oxygen scavenger in the package external to said inner container to absorb residual oxygen within the package; and

activating said oxygen scavenger with [an] a predetermined amount of activating agent, wherein the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 2 hours.

The above claims are representative of the following claims:

| **250 patent claim** | **Other claims** |
|---|---|
| 1 | 250 patent: 2, 4-7, 9-11, 23-24<br>905 patent: 1-22<br>790 patent: 1-7, 9-10<br>457 patent: 1-4, 6, 7, 9-11, 13-14, 16, 20-21, 23<br>142 patent: 1-3, 6-9, 21 |
| 3 | None |
| 21 | 250 patent: 12-20, 22, 27, 30<br>457 patent: 5, 15, 17, 22<br>142 patent: 5, 10-12, 14-15 |

### 2. Appealed Representative Claims Of The 142 Patent

4. (Twice Amended) [A modified atmosphere package, comprising:

a first package configured and sized to substantially totally enclose a retail cut of raw meat and including a non-barrier portion substantially permeable to oxygen;

a second package covering said first package and being substantially impermeable to oxygen, said second package creating a pocket between said first package and said second package, said pocket being substantially free of oxygen solely in response to said pocket being flushed with one or more gases creating a modified atmosphere within said pocket, said second package including a polymeric bag; and

an oxygen scavenger positioned external to said first package to substantially absorb residual oxygen within said pocket, said oxygen scavenger being activated with [an] a predetermined amount of oxygen uptake accelerator],

wherein said oxygen scavenger is constructed to reduce a level of said residual oxygen at a rate sufficient to prevent discoloration of said raw meat.

13. [A method of manufacturing a modified atmosphere package, said method comprising the steps of:

supplying a first package including a non-barrier portion substantially permeable to oxygen;

placing a retail cut of raw meat within said first package;

sealing said first package;

supplying a second package substantially impermeable to oxygen;

covering said first package with said second package without sealing said second package so as to create a pocket between said first package and said second package;

substantially removing oxygen from said pocket solely by flushing said pocket with one or more gases;

supplying an oxygen scavenger positioned external to said first package to absorb residual oxygen within the pocket;

activating said oxygen scavenger with [an] a predetermined amount of oxygen scavenger accelerator, the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 90 minutes; and

sealing said second package],[10]

wherein said oxygen scavenger is constructed to reduce a level of said residual oxygen at a rate sufficient to prevent discoloration of said raw meat.

### B. The Cited Prior Art

The PTAB found the inner/outer package structure of Weinke, combined with the oxygen absorber of Sakai and the teaching of activating an oxygen absorber from GB 853 or Hamon, rendered the claims obvious. (JA0028-53.) The cited prior art is:

#### 1. Weinke

Weinke discloses a meat packaging system comprising an inner oxygen permeable package within an outer oxygen impermeable package. (JA3738, 1:13-25.) Weinke attempts to maintain fresh red color by evacuating oxygen from the package. (*Id.*) Weinke does not disclose an oxygen scavenger, or an oxygen scavenger activator/accelerator. Weinke represents the state of the art in 1971.

#### 2. Sakai

Sakai teaches sealing raw meat in a gas impermeable container with an oxygen scavenger. (JA3715, 23-28.) Per Sakai, "it

[10] Incorporating twice amended claim 10, from which it depends.

is, therefore, possible to make the meat have a freshly reddish tinge caused by oxymyoglobin quickly as soon as the packaging container is opened."[11] (JA3716, 6-8.) Further, "reduction of oxygen concentration in the [sealed] container to a specific value within a specific interval of time [after sealing] made it possible to recreate the red color of meat as a fresh one after opening the container." (*Id.*, 26-29.) Sakai discloses that its technology could reduce oxygen concentrations in the sealed container "to 5 % or less within 24 hours after closely-sealing the meat." (JA3715, 27-28.)

In support, Sakai discloses experimental data. (JA3720, Table 1.) The testing conditions of Sakai were optimal for preventing oxidation of the meat: (a) it used ground beef, which is less pigment-sensitive; (b) it used a plastic tray rather than a foamed tray that might diffuse oxygen; and (c) the scavenger was placed in a sealed container, rather than within an oxygen permeable package. (JA3715, 23-28; JA3719, 11-27.) The data were presented in Table 1:

[11] The version of Sakai in the record is a machine translation.

| | Experimental Plots | At Start-Up | After 12 Hours | After 1 Day | After 2 Days | After 3 Days | After 10 Days |
|---|---|---|---|---|---|---|---|
| Oxygen Concentration (%) | Example 1 | 20.9 | 0.1 or less | 0.1 or less | 0.1 or less | 0.1 or less | 0.1 |
| | Comparative Example 1 | 20.9 | 11.5 | 0.1 or less | 0.1 or less | 0.1 or less | 0.1 |
| | Comparative Example 2 | 20.9 | 20.5 | 19.0 | 16.0 | 12.5 | 1.5 |
| Carbon Dioxide Gas Concentration (%) | Example 1 | 0.03 | 0.05 | 0.08 | 0.08 | 0.1 | 0.15 |
| | Comparative Example 1 | 0.03 | 0.07 | 0.08 | 0.15 | 0.3 | 0.45 |
| | Comparative Example 2 | 0.03 | 3.0 | 5.0 | 13.0 | 18.0 | 27 |
| Metmyoglobin (%) | Example 1 | 12.3 | .. | 96.0 | 69.0 | 38.0 | 30.1 |
| | Comparative Example 1 | 12.3 | - | 84.7 | 85.3 | 68.5 | 33.2 |
| | Comparative Example 2 | 12.3 | .. | 55.8 | 67.0 | 89.3 | 78.4 |
| a-Value | Example 1 | 7.8 | .. | 5 | 5.7 | 7.2 | 7.7 |
| | Comparative Example 1 | 7.8 | - | 3.9 | 4.6 | 6.0 | 7.6 |
| | Comparative Example 2 | 7.8 | .. | 6.4 | 5.3 | 4.0 | 4.9 |

(JA3720.)

The PTAB relied on Example 1, wherein a sample of raw meat had a 30.1% metmyoglobin level after 10 days, but upon removal from the package turned a "fresh red" color. (JA0036.) The a*-Value[12] of Example 1 was 7.7. (JA3720, Table 1.)

[12] a* is a color measure representing a point on the red-green axis, where higher numbers generally indicate more "redness." *See* http://en.wikipedia.org/wiki/Lab_color_space (defining the International Commission on Illumination "L a b Color Scale").

Pactiv and the PTAB agree that a 30.1% metmyoglobin level cannot accurately be called a "fresh red" color. (JA0036; JA1454 ¶ 11.) In fact, meat having 30% metmyoglobin could be unsaleable to a consumer. (JA1454 ¶ 11.) However, the PTAB credited Sakai's statement that this 30.1% metmyoglobin level meat bloomed to a "fresh red" color upon oxygenation. (JA0036.)

Table 1 also disclosed data relative to Comparative Example 1. (JA3719, 29-JA3720, 4; JA3720, Table 1.) After ten days, Comparative Example 1 had a metmyoglobin level of 33.2%, nearly the same as Example 1 (30.1%). (*Id.*) Comparative Example 1 "show[ed] little recovery of their colors and remained brownish." (JA3720, 18-19.) The a*-Value of Comparative Example 1 (which, unlike Example 1, supposedly remained "brownish") was 7.6 – nearly identical to Example 1's a*-Value of 7.7. (JA3720, Table 1.)

Additionally, Sakai began measuring oxygen levels after a 12 hour period. (*Id.*) After one day, the metmyoglobin level of Example 1 (the example relied upon by the PTAB) was 96.0%. (*Id.*)

The PTAB acknowledged the myriad inconsistencies between the data presented and the statements in Sakai. The PTAB stated that "there is insufficient reason to doubt the veracity of" the

statements in Sakai concerning color, but at the same time noted the "discrepancies in metmyoglobin content and color," "the data on metmyoglobin and a-values are not completely predictive," and "we are not persuaded" that the a*-Value of the meat when opened after ten days reflected the meat color. (JA0037.) Nevertheless, the PTAB stated that "we simply do not find that the testimony [offered by Pactiv] undermines the express statements of Sakai." (*Id.*)

### 3. GB 853

GB 853 teaches an activated oxygen absorber for the production of low oxygen or oxygen-free environments for culturing anaerobic bacteria.[13] (JA3710, 1:12-17.) GB 853 does not teach the structure of the absorber, or the speed at which it absorbs oxygen. The only performance criteria in GB 853 is the following statement:

> [W]e have found that the agent according to the present invention, in comparison with the mixture described in J. Clin. Microbiol., possesses a 5 to 10 times better oxygen absorption ability, referred to the amount of iron.

(*Id.*, 2:55-60.)

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[13] Anaerobic bacteria are bacteria that do not require oxygen.

### 4. Hamon

Hamon discloses an activated oxygen absorber to speed oxygen absorption for certain highly oxygen sensitive applications, namely, "fats or wet products, such as mayonnaise, fruits, powder solutions or even glue." (JA3695.) The activated absorber of Hamon requires a two component package that is ruptured to mix reactants. (JA3696.) Hamon discloses that "[t]he rate of absorption will depend on more or less intimate mixture of the reactants can be achieved by vibration (1 kHz for 5 to 10 seconds)." (JA3697.)[14] Hamon makes no mention of the speed at which oxygen is absorbed.

## IV. Prosecution History In Relation To The SNQs

The Director found SNQs based on combinations of the following art:

| **Ref. No.** | **Inventor** | **Patent No.** |
|---|---|---|
| 1 | Nakamura | 4,399,161 (JA3758-63) |
| 2 | Weinke | 3,574,642 (JA3736-40) |
| 3 | Rector | 1,679,543 (JA3722-25) |
| 4 | Loo | 2,825,651 (JA3726-30) |
| 5 | Hayhurst | 3,419,400 (JA3731-35) |
| 6 | Reifers | 3,700,096 (JA3741-52) |

[14] The version of Hamon in the record is an EPO machine translation.

| | | |
|---|---|---|
| 7 | Moyle | 4,364,989 (JA3753-57) |
| 8 | Courtright | 5,064,698 (JA3764-70) |
| 9 | Johnson | 5,247,746 (JA3771-78) |
| 10 | McKedy | 5,332,590 (JA3779-86) |
| 11 | Sakai | JP 58-158129 (JA3712-21) |
| 12 | Breen | 5,667,827 (JA3787-93) |

### A. The 250 Patent

The Director found the following three SNQs relating to all of the claims (1-24):

| **SNQ** | **Art/Combination** | **Claims** |
|---|---|---|
| "A" | 1 | 1-24 |
| "B" | 2 | 1-24 |
| "C" | (1 or 2) "with any of" (3 through 10) | 1-24 |

(JA0949-53.)

The Examiner issued a First Office Action rejecting all 24 claims based on (1) and/or (2) with one or more of (3) through (10). (JA1008-15.) In other words, each rejection in the First Office Action was based on SNQ "C." (*Id.*)

Pactiv amended each of the independent claims and added new claims 25-30 through a Supplemental Response to First Office Action dated February 18, 2011. (JA1091-96.) In response, the Examiner issued a Final Office Action rejecting all claims. (JA1144-56.) Each of the rejections was based upon art that had not

previously formed a SNQ, namely: Mize, Sakai, GB 853, and Hamon. (*Id.*) No claims remained rejected based on any SNQ. (*Id.*) As of the Supplemental Response, Pactiv had overcome every SNQ.

### B. The 790 Patent

The Director found the following eight SNQs relating to all of the claims (1-10):

| **SNQ** | **Art/Combination** | **Claims** |
|---|---|---|
| "A" | 1 | 1-10 |
| "B" | 1+10 | 1-4, 6, 8-10 |
| "C" | 2+1 | 1-6, 8-10 |
| "D" | 2+1+10 | 1-6, 8-10 |
| "E" | 1+8 | 7 |
| "F" | 1+10+8 | 7 |
| "G" | 2+1+8 | 7 |
| "H" | 2+1+10+8 | 7 |

(JA3234-40.)

The Examiner issued a First Office Action rejecting all 10 claims, as follows:

| **Claims** | **Rejection** |
|---|---|
| 1-6, 8, 9 | SNQs "C" and "D" |
| 7 | SNQs "G" and "H" |
| 10 | SNQ "B" |

(JA3250-55.)

Pactiv amended each of the independent claims and added new claims 11-16 in a Second Supplemental Response to First

Office Action dated February 18, 2011. (JA3382-83.) In response, the Examiner issued a Final Office Action rejecting all claims. (JA3407-16.) New claims 11-16 were rejected under 35 U.S.C. § 112, ¶ 2. (JA3407.) Each of the rejections of the amended claims 1-10 was based upon art that had not previously formed a SNQ, namely: Mize, Sakai, GB 853, and Hamon. (JA3408-16.) No claims remained rejected based on any SNQ. (*Id.*) As of the Second Supplemental Response, Pactiv had overcome every SNQ with respect to claims 1-10.

### C. The 142 Patent

The Director found the following 13 SNQs relating to all of the claims (1-15):

| **SNQ** | **Art/Combination** | **Claims** |
|---|---|---|
| "A" | 1+11 | 1-15 |
| "B" | 1+11+10 | 1-15 |
| "C" | 1+5 | 1-15 |
| "D" | 2+1 | 1-15 |
| "E" | 2+1+10 | 1-15 |
| "F" | 2+1+4 | 1-15 |
| "G" | 2+1+4+10 | 1-15 |
| "H" | 2+10 | 1-15 |
| "I" | 2+10+4 | 1-15 |
| "J" | 2+10+5 | 1-15 |
| "K" | 2+4 | 1-15 |
| "L" | 2+5 | 1-15 |
| "M" | 1+8 | 8 |

(JA2695-2706.)

The Examiner issued a First Office Action rejecting all 15 claims, as follows:

| **Claims** | **Rejection** |
|---|---|
| 1-4, 6-7, 9-13, 15 | SNQs "E" and "F" |
| 5, 14 | 2+1+10+11 (Not a SNQ)<br>2+1+4+11 (Not a SNQ) |
| 8 | 2+1+4+(5 or 8) (Not a SNQ)<br>2+1+10+(5 or 8) (Not a SNQ) |

(JA2681-88.) Pactiv amended each of the independent claims and added new claims 16-21 through a Supplemental Response to First Office Action dated February 17, 2011. (JA2772-75.) In response, the Examiner issued a Final Office Action rejecting all claims. (JA2787-94.) Each of the rejections of the amended claims was based upon art that had not previously formed a SNQ, namely: Mize, GB 853, and Hamon. (JA2788-94.) Pactiv canceled claims 16-20 (JA2807), and no remaining claims remained rejected based on any SNQ (JA2788-94). As of the Supplemental Response, Pactiv had overcome every SNQ with respect to claims 1-15 and 21.

### D. The 457 Patent

The Director found the following 34 SNQs relating to all of the claims (1-17):

| **SNQ** | **Art/Combination** | **Claims** |
|---|---|---|
| "A" | 1+11 | 1-6, 8-17 |
| "B" | 1+11+10 | 1-6, 8-17 |
| "C" | 1+5 | 1-4, 6, 16, 17 |
| "D" | 2+1 | 1-4, 6, 8-17 |
| "E" | 2+1+10 | 1-4, 6, 8-17 |
| "F" | 2+1+4 | 1-4, 6, 8-17 |
| "G" | 2+1+4+10 | 1-4, 6, 8-17 |
| "H" | 2+10 | 1, 10, 16, 17 |
| "I" | 2+10+5 | 1, 10, 16, 17 |
| "J" | 2+5 | 1, 10, 16, 17 |
| "K" | 2+4 | 1, 10, 16, 17 |
| "L" | 2+10+5 | 1, 10, 16, 17 |
| "M" | 2+10+5+1 | 2-4, 6, 8, 9, 11-15 |
| "N" | 2+5+1 | 2-4, 6, 8, 9, 11-15 |
| "O" | 1+5+11 | 5 |
| "P" | 2+1+11 | 5 |
| "Q" | 2+1+10+11 | 5 |
| "R" | 2+1+4+11 | 5 |
| "S" | 2+1+4+10+11 | 5 |
| "T" | 2+10+11 | 5 |
| "U" | 2+10+5+11 | 5 |
| "V" | 2+5+11 | 5 |
| "W" | 2+4+1 | 5, 6, 8, 9 |
| "X" | 1+11+8 | 7 |
| "Y" | 1+11+10+8 | 7 |
| "Z" | 1+5+8 | 7 |
| "AA" | 2+1+8 | 7 |
| "BB" | 2+1+10+8 | 7 |
| "CC" | 2+1+4+8 | 7 |
| "DD" | 2+1+4+10+8 | 7 |
| "EE" | 2+10+8 | 7 |
| "FF" | 2+10+5+8 | 7 |
| "GG" | 2+5+8 | 7 |
| "HH" | 2+4+8 | 7 |

(JA1800-22.)

The Examiner issued a First Office Action rejecting all 17 claims, as follows:

| **Claims** | **Rejection** |
|---|---|
| 1-4, 6, 8-14, 16, 17 | SNQ "E" |
| 5, 15 | SNQ "Q" (only for claim 5) |
| 7 | 2+1+10+(5 or 8) (Not a SNQ) |

(JA1834-38.) Pactiv amended each of the independent claims and added new claims 18-23 through a Supplemental Response to First Office Action dated February 17, 2011. (JA1930-33.) In response, the Examiner issued a Final Office Action rejecting all claims. (JA1951-58.) Each of the rejections of the amended claims 1-23 was based upon art that had not previously formed a SNQ, namely: Mize, GB 853 and Hamon. (*Id.*) No claims remained rejected based on any SNQ. (*Id.*) As of the Supplemental Response, Pactiv had overcome every SNQ with respect to claims 1-23.

### E. The 905 Patent

The Director found the following 13 SNQs relating to all of the claims (1-22):

| **SNQ** | **Art/Combination** | **Claims** |
|---|---|---|
| "A" | 11+1 | 1, 9, 10, 14, 17, 19-22 |
| "B" | 11+1+10 | 1, 9, 10, 14, 17, 19-22 |
| "C" | 1+5 | 1, 10, 14, 17, 19-21 |

| | | |
|---|---|---|
| "D" | 1+5+10 | 1, 10, 14, 17, 19-21 |
| "E" | 12+10 | 1, 10, 14, 17, 19-21 |
| "F" | 11+1+2 | 2-8, 11-13, 14, 16, 18 |
| "G" | 11+1+10+2 | 2-8, 11-13, 14, 16, 18 |
| "H" | 1+5+2 | 2-8, 11-13, 14, 16, 18 |
| "I" | 1+5+10+2 | 2-8, 11-13, 14, 16, 18 |
| "J" | 12+10+2 | 2-8, 11-13, 14, 16, 18 |
| "K" | 1+5+11 | 9, 22 |
| "L" | 1+5+10+11 | 9, 22 |
| "M" | 12+10+11 | 9, 22 |

(JA0381-92.)

The Examiner issued a First Office Action rejecting all 22 claims, as follows:

| **Claims** | **Rejection** |
|---|---|
| 1-3, 5, 10-16, 18 | 2+1+10 (Not a SNQ) |
| 9, 22 | 2+1+10+11 (Not a SNQ) (same combination as SNQ "G," but applied to different claims) |
| 4, 6-8, 17, 19-21 | 2+1+10+(other admitted prior art) (Not a SNQ) |

(JA0428-32.) As shown above, none of the original claims was rejected based on a SNQ. (*Id.*)

Pactiv amended each of the independent claims and added new claims 23-24 through a Supplemental Response to First Office

Action dated February 17, 2011. (JA0525-29.) In response, the Examiner issued a Final Office Action rejecting all claims. (JA0560-68.) Each of the rejections of the amended claims 1-22 was based upon art that had not previously formed a SNQ, namely: Mize, GB 853, Hamon, and the other admitted prior art. (*Id.*) At no time were any claims rejected based on any SNQ. (*Id.*)

## SUMMARY OF ARGUMENT

This Court clearly limited the PTO's authority in *inter partes* reexaminations to resolution of the "substantial new question of patentability" found by the PTO Director. *Belkin*, 696 F.3d at 1384. Rejections on bases other than a SNQ are simply not permitted under the statute. The PTO advocated for that very holding when it briefed *Belkin* to this Court. The language relied on (by both this Court and the PTO in its briefing) is *identical* in the *inter partes* and *ex parte* statutes. The result should be the same.

Nevertheless, the PTAB affirmed rejections of *every claim* in this *ex parte* case based on art that did not form an SNQ. The PTAB attempted to distinguish *Belkin*, but there is no difference. The PTAB violated *Belkin*, it is judicially estopped from arguing otherwise, and every rejection here should be reversed.

Even if *Belkin* does not control, the PTAB erred as a matter of law when it affirmed obviousness rejections based on findings not supported by substantial evidence. No reference or combination of references teaches an activated oxygen scavenger suitable to the unique environment of red meat packaging. The problem of red meat packaging is the necessity of absorbing oxygen at a rate sufficient to prevent the formation of metmyoglobin. Yet, the PTAB affirmed rejections based on art that: (a) formed *high levels* of metmyoglobin, and (b) disclosed activated oxygen absorbers *without any data whatsoever to support any absorption rate* – much less the rates necessary to remove oxygen without forming metmyoglobin in red meat. And, even if the art did teach the present invention, the secondary considerations of non-obviousness are overwhelming. The present invention advanced art that had been stagnant for approximately twenty years, was unexpectedly successful based on direct experimental data over the closest prior art, and has been a commercial success. The PTAB gave virtually no weight to any of that evidence. Its rejections were made in error.

## ARGUMENT

### I. Standard Of Review

"Obviousness is a legal question based on underlying factual determinations including: (1) the scope and content of the prior art…; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness." *In re Zurko*, 258 F.3d 1379, 1383-84 (Fed. Cir. 2001). This Court reviews legal questions without deference and factual findings for substantial evidence. *Id.* at 1384. "Substantial evidence is 'such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.' A review under this standard 'involves examination of the record as a whole, taking into consideration evidence that both justifies and detracts from the agency's decision.'" *Id.* (citations omitted). Whether a reference constitutes analogous art supporting an obviousness rejection is a factual issue reviewed for substantial evidence. *In re Klein*, 647 F.3d 1343, 1347 (Fed. Cir. 2011).

## II. The PTAB Erred When Affirming Rejections That Exceeded The PTO's Authority Under *Belkin*

The holding in *Belkin* is squarely applicable to this case. Although arising in a different procedural posture, *Belkin* necessitated a broad holding as to whether the reexamination statute permits rejections based on art that does not form the basis of the statutorily required SNQ. This Court held that such rejections are prohibited under the *inter partes* reexamination statute: "[W]e hold that, under the statute, available prior art may only be considered to answer *the specific questions of patentability found by the Director*." *Belkin*, 696 F.3d at 1384 (emphasis added). Under *Belkin*, once a SNQ is found by the Director, consideration of art not part of that SNQ exceeds the PTO's statutory authority. *Id.* at 1382. The only open issue is whether *Belkin* – which arose in an *inter partes* reexamination – applies equally to *ex parte* reexaminations. If so, Pactiv prevails and all of the rejected claims on appeal should be remanded to the PTO with instructions to issue a reexamination certificate.

The PTAB attempted to limit *Belkin* on two grounds. First, it stated that because of the procedural posture of *Belkin*, it did not

apply to this case – despite unequivocal and broad statements from this Court that clearly show otherwise. Second, it maintained that *Belkin* could not be extended to *ex parte* reexaminations. The PTAB offered no analysis to support that conclusion, which is plainly at odds with the statute. Moreover, it conflicts with the PTO's own position in briefing *Belkin* to this Court.

### A. *Belkin* Required A Resolution Of The PTO's Statutory Authority To Consider Non-SNQ Art In Reexaminations

The issue in *Belkin* was whether arguments based on references not found to create a SNQ were appealable to the PTAB and this Court. *Belkin*, 696 F.3d at 1382. There, Belkin had asked the PTO to review non-SNQ references in its patentability consideration under the *inter partes* statute, and the PTO declined. *Id.* at 1381. Belkin did not petition the Director for a review of that decision, or seek to have those references declared part of a SNQ. *Id.* In that procedural posture, the PTAB (and ultimately this Court) had to consider whether the PTO could nevertheless consider the non-SNQ references.

Even though the question was framed by Belkin's failure to petition the PTO for review, the procedural posture was irrelevant to

the substantive issue. Both the PTAB and this Court recognized that Belkin's failure to petition the PTO to include the non-SNQ art as a SNQ would be fatal to Belkin's arguments against patentability *only if the PTO could not otherwise consider non-SNQ art*. Consequently, this Court observed, "To answer [the question presented on appeal], *we first turn to the language of the statute*." *Id.* at 1382 (emphasis added).

Contrary to the PTAB's position, *Belkin* absolutely stands for the proposition that non-SNQ art cannot be considered in a reexamination. Both the PTAB and this Court recognized that to consider the art Belkin wanted considered, such art must form the basis of a SNQ. Belkin failed to petition the Director to find a SNQ based on that art. As a result, the art Belkin wanted considered never formed the basis of the statutorily mandated SNQ. Accordingly, Belkin lost. The issue of the applicability of non-SNQ art was logically precedent to the question of whether Belkin's failure to seek review of the SNQ decision was fatal, and to suggest otherwise is incorrect.

The PTAB suggests compliance with *Belkin* because the Examiner's rejections constituted new SNQs. (JA0027-28.) That

suggestion conflicts with the statute. The statute requires, *in order*: (1) an order for "resolution of the question" (35 U.S.C. § 304); (2) a period for the patentee to provide a statement concerning the SNQ (*id.*); and *only then* (3) examination of the claims (35 U.S.C. § 305). However, examination is limited to *"the prior art cited under the provisions of § 301, or in response to a decision adverse to the patentability of a claim of a patent."* *Id.* (emphasis added). Section 301 refers to art cited to the PTO in writing – not art found by the PTO on its own. 35 U.S.C. § 301. Thus, compliance would be impossible if Examiners could reject claims on SNQs found midstream on art not cited under § 301. Additionally, the constant moving of the goalposts by resetting the SNQ prevents final "resolution of the question."[15]

The PTAB faults Pactiv for not seeking reconsideration of the

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[15] The PTAB also claims that the Examiner is permitted to find a SNQ pursuant to 37 C.F.R. §§ 1.104 and 1.112. (JA0027-28.) Pactiv does not concede that PTO regulations may override the clear language of the statute, which places that responsibility on "the Director." 35 U.S.C. § 303(a). In fact, *Belkin* specifically considered and dismissed the authority of 37 C.F.R. § 1.104 to override the reexamination statute. *Belkin*, 696 F.3d at 1384 ("Statutes rank higher than regulations, which rank higher than the MPEP"). In any event, the argument fails regardless of who was authorized to make the SNQ determination.

propriety of the Examiner-formulated SNQ (if, in fact, the rejection can be so characterized), citing a 2010 PTO Notice. (JA0027.)[16] Assuming a new SNQ were properly found, Pactiv would have complied with that Notice. The Notice bars review of the SNQ at the PTAB unless raised in the patentee's statement under § 304, or in response to a rejection. "Clarification on the Procedure for Seeking Review of a Finding of a Substantial New Question of Patentability in Ex Parte Reexamination Proceedings," 75 Fed. Reg. 36357 (June 25, 2010).[17] Because the PTO ignored § 304, that possibility did not apply. Instead, Pactiv argued in response to the rejection. Per the Notice, "if the examiner determines that the SNQ is proper, further

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[16] The PTAB also refers to its 2013 Notice: U.S. Patent and Trademark Office, Delegation of Authority, Determination Relating to Substantial New Question of Patentability in an Ex Parte Reexamination Proceeding (2013) (JA3965). That 2013 Notice, however, merely delegates to the Chief Administrative Patent Judge of the PTAB the right to determine an SNQ if that issue is raised in a PTAB appeal. (Id.) That Notice is inapposite; the PTAB violated Belkin regardless of any delegation. *See also supra* note 15.

[17] "Accordingly, for ex parte reexamination proceedings ordered on or after June 25, 2010, the patent owner may seek a final agency decision from the BPAI on the SNQ issue only if the patent owner first requests reconsideration before the examiner (*e.g.*, in a patent owner's statement under 37 CFR 1.530 or in a patent owner's response under 37 CFR 1.111) and then seeks review of the examiner's SNQ determination before the BPAI." *Id.* The PTAB is the successor to the BPAI.

review can be obtained by exhausting the patent owner's rights through the reexamination proceeding and ultimately seeking review before the BPAI along with an appeal of any rejections." *Id.* That is just what happened here. Thus, Pactiv's right to review the propriety of the SNQ at the PTAB was preserved.

### B. *Belkin* Applies to *Ex Parte* Reexaminations

This Court should find that *Belkin* applies to *ex parte* reexaminations for the same reason the Court found it applied to *inter partes* reexaminations. The portions of the *inter partes* statute relied upon in *Belkin* have identical provisions in the *ex parte* statute.

In *Belkin*, this Court stated:

> The statute requires the Director to order reexamination "for resolution of the question." § 313. *The statute is clear that that "question" is the same substantial new "question" of patentability found by the Director under § 312(a).* The statutory framework thus requires that an issue must raise a "substantial new" question of patentability, as determined by the Director, with respect to cited prior art before it can be considered during *inter partes* reexamination.

*Belkin*, 696 F.3d at 1382 (emphasis added). A comparison of the relevant statutory provisions cited above in the *inter partes* context

to the mirror provisions in the *ex parte* context demonstrates that they are identical. First, the Court referred to the definition of the "question" in § 312(a). The relevant language is identical to the mirror *ex parte* provision, § 303(a):

| **35 U.S.C. § 312 – Determination of Issue by Director (Inter Partes)** | **35 U.S.C. § 303 – Determination of Issue by Director (Ex Parte)** |
|---|---|
| (a) Reexamination. Not later than 3 months after the filing of a request for inter partes reexamination under section 311, **the Director shall determine whether a substantial new question of patentability affecting any claim of the patent concerned is raised by the request,** with or without consideration of other patents or printed publications. | (a) Within three months following the filing of a request for reexamination under the provisions of section 302 of this title, **the Director will determine whether a substantial new question of patentability affecting any claim of the patent concerned is raised by the request,** with or without consideration of other patents or printed publications. |

Second, the Court applied that definition to the scope of the PTO's authority under the *inter partes* statute, § 313. That scope is identical to the PTO's authority under the mirror *ex parte* provision, § 304:

| **35 U.S.C. § 313 – Inter partes Reexamination Order by Director** | **35 U.S.C. § 304 – Reexamination Order by Director (Ex Parte)** |
|---|---|
| **If, in a determination made under** section 312(a), **the Director finds that a substantial new question of patentability affecting a claim of a patent is raised, the determination shall include an order for** inter partes **reexamination of the patent for resolution of the question**. | **If, in a determination made under** the provisions of subsection 303(a) of this title, **the Director finds that a substantial new question of patentability affecting any claim of a patent is raised, the determination will include an order for reexamination of the patent for resolution of the question**. |

Based on the analysis of the *inter partes* statute (and equally applicable to identical language in the *ex parte* statute), this Court made two statements that are controlling here. First,

> [A]fter the Director has determined that there is a substantial new question of patentability affecting a claim with respect to prior art, an *inter partes* reexamination is ordered 'for resolution of the question.' 35 U.S.C. § 313. *The question to be resolved is the substantial new question of patentability determined by the Director. If the Director determines that there is no substantial new question of patentability, no reexamination is conducted.*

*Belkin*, 696 F.3d at 1382 (emphasis added). Second, and even more definitively:

> Thus, the scope of reexamination may encompass those issues that raise a

> substantial new question of patentability, whether proposed by the requester or the Director, but, unless it is raised by the Director on his own initiative, it only includes issues of patentability raised in the request under § 311 that the Director has determined raise such an issue. *It otherwise may not include other prior art than what constituted the basis of the Director's determination of a substantial question of patentability*.

*Id.* at 1383 (emphasis added).

The *inter partes* and *ex parte* reexamination statutes serve identical purposes, with identical language. Having construed that language in *Belkin*, there is no reason why the same language should be interpreted differently here, in an *ex parte* proceeding. Every rejection based upon art or combinations of art that did not form a SNQ should be reversed as improper and exceeding the statutory authority of the PTO.

### C. The PTO Is Judicially Estopped From Arguing That *Belkin* Does Not Apply To This Case

In its briefing to this Court in *Belkin*, the PTO took the *exact same position* advocated by Pactiv here: (a) the PTO could not consider art beyond the SNQ, and (b) that limitation on the PTO's authority applied equally to *inter partes* and *ex parte* proceedings.

Having taken that position, it is judicially estopped from arguing otherwise.

Judicial estoppel is generally applicable against a party where: (1) the party's later position is "clearly inconsistent" with the earlier position; (2) the party has succeeded in persuading a court to adopt the earlier position in the earlier proceeding; and (3) the party seeking to assert an inconsistent position would derive an unfair advantage or impose an unfair detriment on the opposing party if not estopped. *New Hampshire v. Maine,* 532 U.S. 742, 750-51 (2001). While these factors are not exclusive, they guide courts' application of their equitable powers. *Id.* Courts have extended judicial estoppel to protect parties that were not litigants to the original proceedings on the grounds that judicial estoppel "protects the integrity of the judicial system, not the litigants." *Burnes v. Pemco Aeroplex, Inc.*, 291 F.3d 1282, 1286 (11th Cir. 2002) (also

citing cases from the First and Sixth Circuits).[18] Here, each of those factors estops the PTO from opposing Pactiv's position.

### 1. The PTAB's Ruling Is "Clearly Inconsistent" With The PTO's Position In *Belkin*

The PTO's briefing in *Belkin* aligns identically with Pactiv's position here. First, the PTO *repeatedly* argued that non-SNQ art could not be considered. In its Summary of the Argument, the PTO writes:

> More fundamentally, Belkin misunderstands the scope of the available prior art in a reexamination proceeding - not only did the examiner not consider the other prior art references cited by Belkin; she could not have done so once she determined that they did not raise SNQs. 35 U.S.C. § 313 expressly provides that once an SNQ is raised, reexamination

[18] This Court addressed judicial estoppel under the heading of "Preclusion of Inconsistent Positions" in *Jackson Jordan, Inc. v. Plasser Am. Corp.*, 747 F.2d 1567, 1578-79 (Fed. Cir. 1984). In that pre-*New Hampshire* case, the Court criticized the flexible and "ad hoc" nature of the doctrine, and noted in particular that the party asserting the doctrine (a non-party to the earlier proceeding where the inconsistent position was taken) had not cited any cases in which the doctrine was applied to benefit a "total stranger." However, the Court declined to apply the doctrine in that case for different reasons, namely that the other party had really not asserted an inconsistent position at all, and the complaining party had not been prejudiced. *Jackson Jordan*, 747 F.2d at 1579-80. Therefore, the statement concerning a "total stranger" was dicta that does not preclude application of judicial estoppel here.

> shall be ordered "for resolution of the question," *i.e.*, the substantial new question of patentability. 35 U.S.C. § 313. Further, this Court has repeatedly held that the USPTO cannot, in a reexamination proceeding, rely on prior art that does not raise an SNQ. The only determinations the examiner made with respect to the prior art references Belkin raises on appeal now were that they did not raise SNQs. Once the examiner made those determinations, she could not consider those references further; reexamination was ordered to resolve the SNQ that was raised by Peirce, not to consider possible rejections based on the references the examiner found did not raise an SNQ.

(JA3944-45.) That position was explained in the PTO's analysis of the structure of the statute ("The Examiner's approach was consistent with the *inter partes* reexamination scheme created by Congress"), and its analysis of the scope of the Examiner's authority ("the scope of the resulting reexamination does not resolve those questions raised by requester that did *not* rise to the level of an SNQ"). (JA3949.) Even in acknowledging that other art may be considered, the PTO took the position, correctly, that consideration of such art required a new SNQ to be found. (JA3950, n.5.)

Additionally, and even more central to the PTAB's error, the PTO in *Belkin* explicitly advocated that its analysis would be

identical had *Belkin* been an *ex parte* case. (JA3953-54, n.9.) The PTO stated, "Belkin argues that the distinction between the two reexamination contexts 'is not relevant' in determining the scope of the available prior art. *The Director agrees*." (*Id.*) (emphasis added). Accordingly, the PTO's earlier position in *Belkin* is "clearly inconsistent" with the PTAB's ruling and supports application of judicial estoppel.

#### 2. The PTO's Position In *Belkin* Prevailed

This Court adopted the PTO's entire line of reasoning in *Belkin*. This factor clearly supports judicial estoppel.

#### 3. Adoption Of The PTO's Contrary And Inconsistent Position In This Case Will Severely Prejudice Pactiv

Pactiv is severely prejudiced by the PTO's inconsistent position for two reasons. First, Pactiv may suffer financial loss under the doctrine of "intervening rights" in litigation concerning the patents.[19] *See Marine Polymer Techs., Inc. v. HemCon, Inc.*, 672 F.3d 1350, 1361-62 (Fed. Cir. 2012) (intervening rights precludes damages for claims amended during reexamination). In this case,

[19] *Pactiv LLC v. Multisorb Techs., Inc.*, Case No. 1:10-cv-00461, N.D. Ill.

every pending claim was amended as a result of rejections that should have been prohibited under *Belkin*, and several of the claims should have been allowed in their original form.

Second, the PTAB's decision deprives Pactiv of its right to receive the reexamination certificate to which it is entitled. Provided the invention meets the conditions for patentability, or overcomes the SNQ, the PTO must grant the patent or issue the certificate. *See* 35 U.S.C. § 102 ("A person *shall* be entitled to a patent unless . . .") (emphasis added); 35 U.S.C. § 307(a) ("the Director *will* issue and publish a certificate . . . confirming any claim . . .") (emphasis added). Because Pactiv is prejudiced by the PTO's failure to adhere to the very position it advocated in *Belkin*, this factor favors application of judicial estoppel.

### D. Under *Belkin*, This Court Should Reverse The PTAB And Remand With Instructions To Allow All Original Claims Amended As A Result Of An Improper Rejection And Any Amended Claims That Overcome A SNQ

The statute, this Court, and even the PTO itself in its briefing in *Belkin*, require reversal of the PTAB. Consequently, this Court will need to formulate the appropriate remedy and remand instructions. Appellate courts have broad authority to fashion

remand orders to do justice under the circumstances. 28 U.S.C. § 2106. Here, the only appropriate remedy is to remand the cases to the PTO with instructions to issue a reexamination certificate (1) confirming the patentability of any claims in their original form that were not initially rejected over any SNQ; and (2) confirming the patentability of any amended claims in the form in which they overcame the SNQ.

Because rejections not based on a SNQ exceed the statutory authority of the PTO, the following claims should be allowed in their original form:

| **Patent** | **Claims** | **Reason** | **Appendix Cite** |
|---|---|---|---|
| 905 patent | 1-22 | Rejections in 1st Office Action based on non-SNQ combinations | JA0428-32 |
| 142 patent | 5, 8, 14 | Rejections in 1st Office Action based on non-SNQ combinations | JA2684-85; JA2687-88 |
| 457 patent | 7, 15 | Rejection in 1st Office Action based on non-SNQ combination | JA1836-38 |

This is the only fair remedy, even though Pactiv amended those claims during the reexamination, because those amendments were necessitated by the PTO's misapplication of the law.

Other claims were amended in response to rejections that *were* based on a SNQ. Subsequent to those amendments, however, the Examiner rejected the claims over new combinations of art that did not form the basis of the SNQ, or completely new art not part of the SNQ. Those claims should be allowable in the form as amended solely to overcome the SNQ, as set forth below:

| **Patent** | **Claims** | **When SNQ Was Overcome** | **Appendix Cite** |
|---|---|---|---|
| 250 patent | 1-30 | As amended by Supplemental Response to First Office Action (February 18, 2011) | JA1091-96 |
| 790 patent | 1-10 | As amended by 2nd Supplemental Response to First Office Action (February 18, 2011) | JA3382-83 |
| 457 patent | 1-6, 8-14, 16-23 | As amended by Supplemental Response to First Office Action (February 17, 2011) | JA1930-33 |
| 142 patent | 1-4, 6-7, 9-13, 15 | As amended by Supplemental Response to First Office Action (February 17, 2011) | JA2772-74 |

While *Belkin* left open the question of how to treat amended claims, *Belkin*, 696 F.3d at 1384 n.2, the premise on which *Belkin* was decided mandates that once an amendment resolves the SNQ, further prosecution exceeds the PTO's statutory authority.

The reexamination proceedings have a singular focus: "resolution of *the question*." 35 U.S.C. § 304 (emphasis added). "The question to be resolved is the substantial new question of patentability determined by the Director. If the Director determines that there is no substantial new question of patentability, *no reexamination is conducted*." *Belkin*, 696 F.3d at 1382 (emphasis added). If conduct of the reexamination depends on a finding of a SNQ, then it necessarily follows that when the SNQ is overcome (whether by amendment or argument, or cancellation of claims), the reexamination must come to an end.

A reexamination is, by design, a *limited review of patentability*. The reexamination statute permits the PTO to rely on additional art to reject claims – but only if the Director first determines that such additional art (or combinations of art) creates a SNQ. *Id.* at 1383 ("Indeed, the PTO may make any new rejection, *as long as the rejection also meets the SNQ requirement*.") (emphasis added).

Limiting the prosecution to the singular question presented is consistent with the overall structure of the Patent Act's post-grant review scheme.

Importantly, the Patent Act elsewhere provides for unlimited re-prosecution of issued patents under an entirely different statutory scheme: reissue proceedings. *See* 35 U.S.C. § 251. The reissue proceeding is broader, however, in several important respects: (1) it requires the patentee to declare the patent invalid, whereas patents in reexamination remain in effect unless and until claims are canceled in a final reexamination certificate; (2) reissue prosecution is unlimited in the scope of prior art (*e.g.*, including on-sale bar), whereas reexaminations are limited to patents and printed publications; and (3) all issues of patentability are within the scope of the reissue statute (*see* 35 U.S.C. § 251(c)), whereas reexaminations are limited to "resolution of the [SNQ]." Ignoring *Belkin* frustrated Congressional intent by impermissibly encroaching on reissue proceedings.

The PTAB ignored unambiguous language from *Belkin*, the straightforward statutory analysis performed in *Belkin*, and even the very position the PTO earlier advocated to this Court. *Belkin*

mandates that this Court reverse the PTAB and remand with instructions to issue a reexamination certificate confirming the claims as set forth below:

| **Patent** | **Claims** | **Form** | **Appendix Cite** |
|---|---|---|---|
| 250 patent | 1-30 | As amended by Supplemental Response to First Office Action (February 18, 2011) | JA1091-96 |
| 790 patent | 1-10 | As amended by 2nd Supplemental Response to First Office Action (February 18, 2011) | JA3382-83 |
| 142 patent | 5, 8, 14 | In original form | JA0173 |
| 142 patent | 1-4, 6-7, 9-13, 15 | As amended by Supplemental Response to First Office Action (February 17, 2011) | JA2772-74 |
| 457 patent | 7, 15 | In original form | JA0162-63 |
| 457 patent | 1-6, 8-14, 16-23 | As amended by Supplemental Response to First Office Action (February 17, 2011) | JA1930-33 |
| 905 patent | 1-22 | In original form | JA0143-44 |

## III. The PTAB Erred As A Matter Of Law When It Affirmed The Examiner's Prior Art Rejections

Each of the PTAB's obviousness rejections was wrong as a matter of law and merit reversal by this Court. First, the rejections affirmed by the PTAB required findings of fact inconsistent with fundamental principles of chemistry and meat science, and therefore were not supported by substantial evidence. Second, the PTAB combined non-analogous art having different purposes and directed to different problems, and therefore lacking any motivation to combine. Third, the PTAB gave little or no consideration to Pactiv's secondary considerations of non-obviousness, instead holding Pactiv to almost unattainable standards of proof that this Court has never required. The PTAB's myriad errors should be reversed.

### A. The Weinke, Sakai And GB 853 Rejection (Ground I) Is Improper And Goes Against Fundamental Principles Of Meat Science

While Weinke teaches "a modified atmosphere package with inner and outer containers," the PTAB acknowledged that "Weinke does not describe an oxygen scavenger or activating agent." (JA0028.) The PTAB improperly applied Sakai (scavenger) and GB

853 (activator) to address the deficiencies of Weinke. To support that combination, however, the PTAB relied on anecdotal statements from Sakai that are wholly at odds with its data and violate scientific principles. Pactiv submitted declarations of an inventor, Mr. Gary DelDuca, and technical expert, Dr. Melvin Hunt, to detail Sakai's failings. Both declarants have extensive knowledge in modified atmosphere packaging and meat chemistry, and the PTAB agreed both "are qualified to testify as to the matters in their declarations." (JA0032.) Nevertheless, the PTAB erroneously, and without substantial evidence, credited Sakai's inconsistent statements over the scientifically valid (and uncontroverted) testimony of Pactiv's declarants.

#### 1. Sakai's Anecdotal Statements Are Not Supported By Sakai's Numerical Data And Go Against Fundamental Principles Of Meat Science

The PTAB relied on anecdotal statements from Sakai inconsistent with the very data on which they are based. (JA0035.) These statements are:

- "Next, as for the color of the meat after opening the package, Example 1 recovered a fresh red color, while Comparative Example 1 showed little recovery of their colors and remained brownish." (JA3720, 17-19.)

- *Actual Data:* Example 1 and Comparative Example 1 had nearly identical a*-Values, *i.e.*, red color (7.7 v. 7.6) (*id.,* Table 1).

- "The inventors of the present invention and others had conducted the study on a method for closely-sealing meat together with deoxidizers to prevent the meat from discoloration. As a result, it was discovered that the reduction of oxygen concentration in the [sealed] container to a specific value within a specific interval of time [after sealing] made it possible to recreate the red color of meat as a fresh one after opening the container." (JA3716, 23-29.)

    - *Actual Data*: The metmyoglobin (brown) levels of the meat were *higher* in the inventive example after one day (96% v. 84.7%), and remained at a high level that would be considered "brown" even after 10 days (30.1% v. 33.2%) (JA3270, Table 1).

These statements clearly have no support whatsoever in the data in Sakai.

The PTAB attempts to bolster Sakai's "teachings" through reliance on Example 1 of Table 1. (JA0035-36.)[20] Example 1 discloses raw meat in a single package having a 30% metmyoglobin level after 10 days, but which Sakai nevertheless asserts turns a "fresh red" color upon removal from the package. (JA0036.) This

[20] Table 1 of Sakai is reproduced on page 19 *supra*.

assertion, relied upon by the PTAB, is not possible under fundamental laws of meat science.

First, Pactiv's expert Dr. Hunt stated that a 30% metmyoglobin level would lead to a brown color that cannot accurately be called a "fresh red" color. (JA1454 ¶ 11.) The PTAB did not disagree. (*See, e.g.*, JA0036.) In fact, this amount of metmyoglobin could prevent the raw meat from being sold to a consumer. (JA1454 ¶ 11.)

Second, the PTAB's contention that "although the metmyoglobin was 30.1%, the meat still bloomed to a red color upon opening the package and exposing the meat to air" (*see* JA0036) goes against fundamental principles of meat science. Metmyoglobin (brown) does *not* turn oxymyoglobin (red) upon exposure to the environment (opening of the package). (JA1319, 2:32-39.) Metmyoglobin can potentially turn to deoxymyoglobin (purple), and subsequently to oxymyoglobin (red), but this change can only occur in a *reduced oxygen* environment. (*See supra* pages 8-9.) This change cannot occur when the retail cut of raw meat is exposed to an oxygen-rich environment (*e.g.*, ambient air). (*Id.*) The PTAB provided no reasoning on how Sakai accomplishes something contrary to fundamental principles of meat science. Thus, the

PTAB's reliance on Sakai's statement that Example 1 obtained a "bright red" color upon exposure to the environment is totally inconsistent with the data, and if true, would violate known scientific principles. Based on the data presented, a person having ordinary skill in the art (POSA) *would not trust* Sakai's statements, nor look further at Sakai to solve the problem of blooming meat to a "fresh red" color. *See In re Oelrich*, 579 F.2d 86, 91-92 (C.C.P.A. 1978) (affidavits of experts, conceded to be POSAs, concerning what a POSA would understand from a prior art reference, were more persuasive than statement in reference).

Third, Sakai's statements are belied by its own comparative data showing meat with nearly identical measured properties, but which Sakai anecdotally reports as different. In particular, Example 1 and Comparative Example 1 had similar levels of metmyoglobin after 10 days: 30.1% v. 33.2%. (JA3720, Table 1.) But, Sakai discloses that Example 1 achieved a "bright red" color, while Comparative Example 1 "show[ed] little recovery of their colors and remained brownish." (JA3720, 17-19.) The PTAB provided no rationale on how meat having two similar metmyoglobin levels after 10 days produced drastically different colored meat pigments upon

exposure to the environment, nor could it. Pactiv's expert, Dr. Hunt, explained that such data is fundamentally inconsistent with the anecdotal statements in Sakai about color. (JA1454-55 ¶¶ 13-14.) Tellingly, the two examples had almost identical a*-Values (7.6 v. 7.7), indicating nearly identical levels of "redness." (JA3720, Table 1.) This data in Sakai provides further evidence that Sakai's statements are not just inconsistent, but that a "bright red" color was not, in fact, obtained.

Thus, to credit the PTAB's interpretation of Sakai, one must believe the following: (1) metmyoglobin can turn "bright red" upon exposure to the environment despite fundamental principles of meat science; and (2) identically stored retail cuts of raw meat for 10 days with similar levels of metmyoglobin can have drastically different meat pigments upon exposure to the environment.

The PTAB's struggle to make sense of Sakai was evident:

> Since there is insufficient reason to doubt the veracity of this statement by Sakai, it is apparent that the data on metmyoglobin and a-values are not completely predictive of the meat color upon opening the package after storage with the deoxidizer, despite apparent discrepancies in metmyoglobin content and color. Indeed, we are not persuaded that the a-value after ten days reflects the meat color

> when the package is opened and exposed to air.

(JA0037.) Here, the PTAB makes the nonsensical statement that "[s]ince there is insufficient reason to doubt the veracity [of the color statements] . . . the data . . . are not completely predictive . . . despite apparent discrepancies." Evidently, scientifically valid and undisputed data at odds with observations are "insufficient" to raise doubts.

Indeed, Pactiv's declarants confirm that the data itself *did* provide sufficient reason to "doubt the veracity of [the statements]." Importantly, Pactiv has not challenged the accuracy of the data in Sakai. Pactiv challenged the statements in Sakai that are wholly inconsistent (and scientifically at odds) with that data. The data in Sakai completely undermines its purely anecdotal statements. Rather than draw the obvious conclusion that *Sakai's statements* are not persuasive, the PTAB concluded that *Pactiv's declarants* were not persuasive. (*Id.*) ("we simply do not find that the testimony [of Pactiv's declarants] persuasively undermined the express statements in Sakai"). Between the choices of crediting Sakai's statements – *which its own data undermines* – or the testimony of

Pactiv's inventor and an expert in the field *relying on that same data*, the PTAB chose the least logical approach. That choice was not supported by substantial evidence. *In re Oelrich*, 579 F.2d at 91-92.

The inherent unreliability of Sakai would prevent any POSA from looking there to solve the problems addressed by the present invention. Indeed, the poor results exemplified by the data in Sakai would have *discouraged* a POSA from pursuing Sakai's solution. Substantial evidence to support the so-called teachings of Sakai is totally lacking. Because Sakai is central to *every rejection in the case*, and because substantial evidence is lacking to support the teachings necessary to those rejections, this Court should reverse all of the obviousness rejections in this appeal.[21]

### 2. A POSA Would Not Look To GB 853 To Preserve Color In Raw Meat

Even assuming Sakai were enough to motivate a POSA to include an oxygen absorber in the system of Weinke, there is no teaching anywhere in the record to suggest an activated oxygen

[21] This rationale applies to each of the representative claims: 1, 3 and 21 of the 250 patent, and 4 and 13 of the 142 patent, together with all of the claims they represent (*see supra* page 15).

absorber would reduce oxygen at the rate necessary to maintain red color in raw meat. Nevertheless, and without any evidence (much less substantial evidence), the PTAB affirmed the Examiner's application of GB 853 for its teaching of an "activating agent." (JA0039-40.) While GB 853 discloses an activated oxygen absorber, the POSA would not have considered it for at least three reasons: (1) GB 853 focuses exclusively on culturing anaerobic bacteria in petri dishes and has nothing to do with preserving meat; (2) the conditions for using the oxygen-absorbing agent in GB 853 are very different from Weinke or Sakai; and (3) GB 853 does not include any absorption rate information *whatsoever*, yet rate of absorption is the *key problem addressed by the instant invention*.

The PTAB acknowledged that GB 853 is "drawn to a different field of endeavor as Weinke and Sakai," but then concluded that GB 853 is analogous prior art and "reasonably pertinent to the particular problem." (JA0038-39.) However, a reference is reasonably pertinent to a particular problem if "the matter with which it deals logically would have commended itself to an inventor's attention in considering his problem." *In re Klein*, 647 F.3d at 1348.

Here, the PTAB utterly failed to properly identify the inventor's problem. Packaging raw meat raises a unique problem of preventing metmyoglobin from forming. The solution requires reducing oxygen quickly, and even more particularly, removing the oxygen quickly through a particular metmyoglobin-forming oxygen range (*i.e.*, 0.5-2.0%). (JA0139-40, 2:65-3:16.) Rather than identify the particular problem, the PTAB broadly characterized the inventor's focus as "applications in which oxygen depletion was desired." (JA0039.) Having missed the point of the invention, the PTAB looked to the specific purpose of GB 853, namely culturing anaerobic bacteria in a petri dish, and extrapolated a teaching that its technology "can be used effectively to reduce oxygen in *any* desired atmosphere." (*Id.*) (emphasis added). By defining the problem broadly, then concluding that the limited disclosure of GB 853 was applicable to "any" atmosphere, the PTAB compounded its error and eviscerated the requirement that analogous art relate to the "*particular*" problem being solved.

Regardless, even if GB 853 is considered relevant to the unique problem associated with retail cuts of raw meat (which it is not), Pactiv has presented overwhelming evidence why a POSA

would not look to GB 853. GB 853 is missing *any* relevant data that would draw the notice of a POSA interested in rapid oxygen absorption. GB 853 omits:

- any rate data;
- the volume of the anaerobic vessel;
- the amount of initial oxygen present in the anaerobic vessel when the oxygen-absorbing agent is added; and
- any comparative data.

(JA1332 ¶ 18.) It is unclear how a POSA could find motivation from GB 853 missing these critical elements. (*Id.*)

Furthermore, the use of an activating agent to speed the process is *not* suggested by GB 853. Instead, GB 853 focuses on the precise ratio of components of its scavenging agent to achieve its functionality, not the fact that it is activated. (JA3710, 1:90-2:78.) The long-felt need addressed by the present inventions was to quickly reduce the oxygen level, while not lagging in the range of oxygen concentration where metmyoglobin forms. Critically to the problem, GB 853 provides no guidance that its "activation" sufficiently speeds absorption to be applicable to raw meat.

The PTAB's affirmance indicating that a POSA would look to GB 853 in addressing the problems directed to retail cuts of raw meat is not supported by substantial evidence. If this Court agrees that a POSA would not look to GB 853 to address raw meat packaging, then this Court should reverse each and every Ground I rejection.[22]

### B. The Weinke, Sakai And Hamon Rejection (Ground II) Is Also Improper And Goes Against Fundamental Principles Of Meat Science

This Court should reverse the PTAB's obviousness rejections on Ground II as a matter of law. Ground II relies on Sakai to the same extent as Ground I and suffers from the same infirmity. In Ground II, however, the PTAB substituted Hamon for GB 853. The substitution is equally deficient. A POSA would no more look to the activated absorber of Hamon than he would to GB 853.

Throughout its analysis, the PTAB fails to acknowledge the unique problems presented in creating low oxygen atmospheres for red meat, namely the need to absorb oxygen quickly to prevent an

[22] This would result in allowance of representative claim 21 of the 250 patent and all of the claims it represents (*see supra* page 15) since these claims were not rejected under any other ground.

irreversible, unsaleable brown color. Thus, Hamon's solution for dried fish, pastries, mayonnaise, fruit, powder solutions and glue, would not have drawn the attention of a POSA looking to solve the problem of red meat. (JA1333 ¶¶ 19-20; JA3695.) Critically, the core problem of oxygen absorption for a red meat package is a rate problem. And, just as in GB 853, the PTAB acknowledged that Hamon does not disclose *any information concerning the rate of oxygen absorption*. (JA0044.)

Failing to even make this *prima facie* case of obviousness, the PTAB instead flips the burden to Pactiv, stating, "Patent Owner has not provided persuasive evidence that the disclosure of certain specific examples would have led away from the more general teaching of the use of reducing and activator agents to absorb oxygen in food packaging systems." (JA0041.) That statement is simply inaccurate. Pactiv provided the *only evidence* in the record concerning what would motivate a POSA – rapid oxygen absorption. (*See*, *e.g.*, JA1333 ¶ 22.) Without any rate data at all, there would have been no reason for a POSA to have looked at Hamon – whether activated or not.

Ground II is insufficient as a matter of law to show obviousness of the claims at issue. Each of the rejections based on Ground II should be reversed.[23]

### C. The Ground I Rejection Is Not Applicable To Claims With Detailed Oxygen Scavenger Features

The PTAB erred as a matter of law when it affirmed the Examiner's obviousness rejections of claims specifically containing absorption rate limitations. Claim 21 of the 250 patent recites "activating said oxygen scavenger with a predetermined amount of activating agent, wherein the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 2 hours." Other claims argued together with claim 21 of the 250 patent (*see supra* page 15) recite "the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 90 minutes."[24] *No prior art reference of record supplies these limitations*.

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[23] *See supra* note 6.

[24] *E.g.*, the 457 patent, claim 17, and the 142 patent, claim 10. *See also supra* page 15 for a complete listing of claims argued together with the 250 patent, claim 21.

There is no disclosure, teaching or suggestion that the proposed combination of Weinke, Sakai and GB 853 would obtain the claimed activity levels. (JA1332 ¶ 18.) Indeed, there is no teaching or suggestion that *any prior art scavenger – activated or not* – lowers the oxygen level in a package containing a retail cut of raw meat to less than about 0.05 percent in less than about 90 minutes or less than about 2 hours.

The PTAB cites support for these limitations in Sakai's data suggesting the oxygen was reduced to 0.1% after 12 hours. (*See* JA0043.) But not only does that data relate to a period *six times longer than claimed*, the system of Sakai performed poorly despite relatively ideal conditions for absorbing oxygen in a packaging system. (JA1305-06 ¶¶ 19, 20; *see* JA3720, Table 1.)

The PTAB also focused on GB 853's statement that "[a]fter only a few minutes, a practically oxygen-free environment is produced in the anaerobic vessel." (JA0043.) This statement is wholly insufficient to give any motivation to a POSA. First, GB 853 is not analogous art. Second, GB 853 says nothing about how much oxygen was in the package to begin with. Finally, a small anaerobic petri dish surely is not properly comparable with a

system wherein red meat is packaged in an oxygen permeable inner bag. As discussed above, almost every relevant bit of data is missing from GB 853 – no rate data, no volume of anaerobic vessel, no disclosure of initial oxygen present and no comparative data. GB 853 is classic "apples and oranges."

Additionally, claims 4 and 13 of the 142 patent recite that the "oxygen scavenger is constructed to reduce a level of said residual oxygen at a rate sufficient to prevent discoloration of said raw meat." *No prior art reference of record supplies these limitations.* There is no teaching or suggestion that *any prior art scavenger – activated or not –* reduces the level of residual oxygen at a rate sufficient to prevent discoloration of the raw meat.

The PTAB cites Sakai for this limitation. (*See* JA0083-86.) But, as discussed, Sakai *did not* reduce the level of "residual oxygen at a rate sufficient to prevent discoloration of said raw meat" – it had a 96% metmyoglobin level after one day. (*See, e.g.*, JA1455 ¶ 15.)

Accordingly, claims 21 of the 250 patent (with the claims it represents), and claims 4 and 13 of the 142 patent, are separately patentable. The PTAB's affirmance of obviousness relating to those claims should be reversed.

### D. The Modified Ground I And II Rejections Are Not Applicable To The Claim Directed To Foam Trays

Dependent claim 3 of the 250 patent (incorporating parent claim 2) recites "wherein said inner container includes a tray and a cover, said cover being engaged to said tray to form said inner container, wherein said tray is comprised of polystyrene foam." Foam trays have a substantial amount of oxygen contained in their cellular structure that diffuses out over five to six days. (JA1296 ¶ 8.) Oxygen evacuation techniques alone (*e.g.*, Weinke) cannot remove that trapped oxygen. (*Id.*) Thus, rapid removal of oxygen to avoid forming metmyoglobin is even more *necessary* when the package includes a foam tray.

Nevertheless, Sakai provided undesirable results under relatively ideal conditions using an *unfoamed* tray. (JA1305-06, ¶ 19.) There would be no expectation that the combination using Sakai would work using a foamed tray that diffuses oxygen. Rather, Sakai's poor results would be expected to be even worse using a foam tray. GB 853 is directed to culturing bacteria in an anaerobic vessel, not a package that actually *adds* oxygen to the system such as a foam tray. Hamon also provides no indication it would perform

in an environment where oxygen is continually supplied. Substantial evidence simply does not exist to support any of the applied art working in the claimed environment. The PTAB's affirmance of the Examiner's obviousness rejection of claim 3 of the 250 patent was error and should be reversed.

### E. The PTAB Improperly Discounted Substantial Evidence Of Non-Obviousness

The PTAB *must* consider secondary considerations of non-obviousness when such evidence is presented. *In re Sernaker*, 702 F.2d 989, 996 (Fed. Cir. 1983). Here, the PTAB stated that it considered Pactiv's overwhelming evidence of secondary considerations, but in reality, it found myriad excuses *not* to give any weight to that evidence. (JA0053.) The PTAB's treatment of Pactiv's evidence was error.[25]

[25] Because the examination of the claimed inventions failed to produce a *prima facie* case of unpatentability as described above, Pactiv is entitled to the grant of the patent even *without* submitting evidence of secondary considerations. *In re Hans Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) ("If examination at the initial stage does not produce a prima facie case of unpatentability, then *without more* the applicant is entitled to grant of the patent.") (emphasis added).

### 1. Pactiv's Invention Achieved Unexpected Results

Evidence of unexpected results supports a finding of non-obviousness. *Leo Pharm. Prods., Ltd. v. Rea*, 726 F.3d 1346, 1358 (Fed. Cir. 2013). The record here includes extensive evidence of unexpected results produced by experiments comparing (1) a prior art, unactivated scavenger packet[26] that was activated using an oxygen scavenger accelerator, and (2) the same scavenger packet that was not activated using an oxygen scavenger accelerator. (JA1303-05 ¶¶ 8-16; JA1321-22, 6:10-8:48.) When the scavenger packet was activated with an oxygen scavenger accelerator, the retail cut of raw meat did not form metmyoglobin and turn brown. (JA1305 ¶ 16.) According to Mr. DelDuca, "[t]his was a surprising and unexpected result since those skilled in the art believed that oxygen scavengers could not be used with retail cuts of raw meat because the activation times were too slow to prevent the raw meat from turning metmyoglobin." (*Id.*)

The PTAB, without any contrary evidence, asserts that "contrary [] to Mr. DelDuca's testimony, there was a reasonable

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[26] Commercially available under the trade name "Multiform MRM 100."

expectation that an oxygen scavenger could, under storage conditions, preserve the meat's red color when opened." (JA0051.) This assertion, however, completely ignores the fact that in an actual experiment using a state-of-the-art oxygen scavenger (without an oxygen scavenger accelerator), the retail cut of raw meat turned an unacceptable brown color. (JA1304 ¶¶ 11-12.) The PTAB also ignores Sakai's experimental results showing its deoxidizer did not reduce oxygen concentration quickly enough to prevent a metmyoglobin level of 96% after one day. (JA1305-06 ¶ 19; *see* JA3720, Table 1.) The evidence of record firmly establishes why those skilled in the art believed that oxygen scavengers could not be used with retail cuts of raw meat. (JA1304 ¶ 12.) Given this belief, the results of the experiments using oxygen scavengers as claimed were surprising and unexpected. (JA1305 ¶ 16 .) "Because the Board ignored the evidence of record and relied instead upon its own conjecture, its treatment of [Appellant's] argument regarding unexpected results was improper." *In re Huai-Hung Kao*, 639 F. 3d 1057, 1069 (Fed. Cir. 2011).

### 2. Pactiv's Invention Addressed A Long Felt Need

Evidence that the claimed invention unexpectedly solved a longstanding problem also defeats a *prima facie* case of obviousness. *See, e.g.*, *Knoll Pharm. Co. v. Teva Pharm. USA, Inc.*, 367 F.3d 1381, 1385 (Fed Cir. 2004). Here, Pactiv's invention solved a decades-long need. (JA1299 ¶¶ 19-20.)

The closest prior art, Weinke, attempted to preserve retail cuts of raw meat with a two pouch solution and oxygen evacuation. (JA3738, 1:13-25.) That technique, published in 1971, had *already identified the long-felt problem of preserving retail cuts of raw meat.* (*See, e.g.*, JA3738, 1:30-50.) It was not until Pactiv filed for its patents in 1996 – 25 years after Weinke – that an acceptable solution emerged.

Even were one to assume that adding an activated oxygen scavenger to Weinke would have been sufficient to teach the present inventions, one would *still find that it took Pactiv's invention to solve the problem.* For example, GB 853, which is relied on for teaching an activated scavenger, published in 1979. Although the teachings of Weinke and GB 853 may have been known in 1979, it was not

until 1996 that the solution to the long-felt but unsolved need for the combination of their teachings was created.

The PTAB contends that "the fact that no one combined these publications before is insufficient by itself to establish not obviousness [sic] of the claimed invention." (JA0049.) This Court, however, has held that "[t]he intervening time between the prior art's teaching of *the components* and the eventual preparation of *a successful composition* speaks volumes to the nonobviousness of the [] patent." *Leo Pharm. Prods.*, 726 F.3d at 1359 (emphasis added). Here, the seventeen years between the teaching of the components of Weinke and GB 853 and the successful combination by Pactiv in 1996 overwhelmingly qualifies as objective evidence of non-obviousness. *Id.*

**3. Pactiv's Invention Achieved Commercial Success**

Pactiv's invention also achieved enough commercial success to easily support its non-obviousness. (JA1334 ¶ 26.) While evidence of commercial success requires a "nexus" between the success and the claimed invention, that "nexus" is presumed where, as here, the commercial embodiment fully embodies the claimed invention. *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d

1120, 1130 (Fed. Cir. 2000). Additionally, adoption of a product by an industry or acceptance in the marketplace constitutes commercial success that weighs against obviousness. *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546 (Fed. Cir. 1998); *Vandenberg v. Dairy Equipment Co.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984); *see also Ecolochem, Inc. v. S. Cal. Edison Co.,* 227 F.3d 1361, 1377 (Fed. Cir. 2000) (providing evidence of commercial success where invention is practiced in 28 plants).

Pactiv's ActiveTech® meat packages, systems and processes have been commercially successful, and are covered fully by the claims. (JA1334 ¶¶ 25-26.) Nevertheless, the PTAB required Pactiv to prove a nexus between the claimed invention and the commercial success, *i.e.*, that it was not due to other factors such as marketing. (JA0053.) Given that the claims fully encompass the advancement over the prior art embodied in Pactiv's ActiveTech® system, there was no need to provide any further evidence of "nexus," and the burden was squarely on the PTO to provide the evidence sought by the PTAB. *Brown & Williamson*, 229 F.3d at 1130 ("However, if the marketed product embodies the claimed features, and is coextensive with them, then a nexus is presumed and the burden

shifts to the party asserting obviousness to present evidence to rebut the presumed nexus."). Indeed, prior art systems with two bags and oxygen evacuation techniques remained available without activated scavengers; any purchase of the ActiveTech® system would have necessarily been to obtain the advantages of the present invention.

Additionally, the biggest protein processors in the U.S. in partnership with the biggest retailers have relied on Pactiv's ActiveTech® meat packages, systems and processes. (JA1334 ¶ 26.)

The PTAB erred when it declined to consider all such evidence.

## CONCLUSION

This Court should reaffirm its own holding in *Belkin*, and as previously advocated by the PTO, find *ex parte* reexamination rejections that go beyond a SNQ are prohibited. For the above reasons, the Court should reverse the PTAB and remand the case to the PTO with instructions to issue a reexamination certificate in each case, and confirm the patentability of each claim, in a form in which it overcame a SNQ. Alternatively, the Court should find that the PTAB erred as a matter of law when it substituted its own speculation and definition of the problem to be solved, and

combined non-analogous and unreliable art in support of its finding of obviousness. None of the conclusions of the PTAB is supported by substantial evidence, and for the reasons set forth above, this Court should reverse each and every obviousness rejection.

Respectfully submitted,

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# ADDENDUM

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 90/011,132 | 08/03/2010 | 6,231,905 | 91943.000577 | 7442 |

56356 7590 08/16/2013

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| EXAMINER | |
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| JASTRZAB, KRISANNE MARIE | |
| ART UNIT | PAPER NUMBER |
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| 08/16/2013 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PACTIV LLC
Patent Owner and Appellant

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Appeal 2013-003339
Reexamination Control 90/011,132
Patent U.S. 6,231,905 B1
Technology Center 3900

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Before LORA M. GREEN, RICHARD M. LEBOVITZ, and JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on the appeal by Patent Owner Pactiv LLC, from the Patent Examiner's rejections of claims 1-22 in this *ex parte* reexamination proceeding. The Board's jurisdiction for this appeal is under 35 U.S.C. §§ 6(b), 134(b), and 306. We affirm.

## I. STATEMENT OF CASE

This appeal involves US 6,231,905 B1 ("the '905 patent") which issued May 15, 2001. The named inventors are Gary R. DelDuca, Alan E. Deyo, Vinod K. Luthra, and Wen P. Wu.

A Request for *Ex Parte* Reexamination of the '905 patent was made by a third-party requester, Multisorb Technologies, on August 3, 2010. Reexamination of the '905 patent was subsequently ordered (Order Granting Request for Reexamination, September 20, 2010). An oral hearing was held April 10, 2013. A transcript was into the record on July 23, 2013.

The real party in interest in this *ex parte* reexamination proceeding is the patent owner, Pactiv LLC (Appeal Br. 2, dated February 28, 2012). Patent Owner states that it is involved in litigation against Multisorb in Civil Action No. 10-cv-07609 (Pactiv Corporation v. Multisorb Technologies, Inc.) in the United States District Court, Northern District of Illinois in which U.S. Patent Nos. 6,183,790, 5,698,250, 5,948,457, 5,811,142, 6,231,905, 6,315,921 and 6,395,195 have been asserted.

The present reexamination proceeding is related to the following *ex parte* reexaminations:

(1) Control No. 90/011,128 (US 6,183,790) (Appeal 2013-002087).

(2) Control No. 90/011,131 (US 5,948,457) (Appeal 2013-003338).

(3) Control No. 90/011,130 (US 5,811,142) (Appeal 2013-003324).

(4) Control No. 90/010,976 (US 5,698,250) (Appeal 2013-001728).

(5) Control No. 90/011,596 (US 6,315,921).

(6) Control No. 90/011,597 (US 6,395,195).

Reexaminations (1) to (4) are decided concurrently with this appeal.

The technology in the '250 patent involves packaging for meat. The '250 patent teaches that "[p]ackaging systems which provide extremely low levels of oxygen are generally preferable because it is well known that the fresh quality of meat can be preserved longer under anaerobic conditions than under aerobic conditions." (Col. 1, ll. 36-39.) The '250 patent describes prior art systems in which the atmosphere is evacuated of oxygen and optionally filled with gases other than oxygen to preserve the meat (col. 1, ll. 40-61). "The meat in the modified atmosphere package takes on a less desirable purple-red color which few consumers would associate with freshness. This purple-red color, however, quickly 'blooms' to a bright red color generally associated with freshness when the package is opened to oxygenate the fresh meat by exposure to air." (Col. 1, ll. 61-66.) The '250 patent describes the invention as a packaging system which comprises an oxygen scavenger to substantially absorb residual oxygen in the package that remains after the package is flushed with gases to substantially eliminate the oxygen in the package atmosphere (col. 2, ll. 36-56). The claims are drawn to packaging systems, and methods of making them, comprising an **oxygen scavenger** and also a predetermined amount of an **activator** to increase the rate of oxygen absorption (claims 1, 12, 21, 23; col. 4, ll. 35-39). As explained in the patent, the retail meat is stored in the package, and just prior to display at the grocery store to the consumer, the package is opened and the meat exposed to air (col. 2, ll. 31-33; col. 4, ll. 55-58). The meat is oxygenated and quickly changes or "blooms" to a bright red color (*id.*).

## II. REJECTIONS

Claims 1-22 are original claims pending. Claims 1, 10, and 14 are independent and were amended during the reexamination proceeding (Appeal Br. 2). Patent Owner appeals the Examiner's decision to reject the claims. The claims stand rejected by the Examiner as follows:

1. Claims 1-3, 5, 9-16, 18 and 22 are unpatentable under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,574,642 to Weinke ("Weinke") in view of JP 58-158129 to Sakai[1] ("Sakai") and GB 1,556,853 ("GB '853").

2. Claims 1-3, 5, 9-16, 18 and 22 are unpatentable under 35 U.S.C. § 103(a) as obvious over Weinke in view of Sakai and EP 468,880 to Hamon[2] ("Hamon").

3. Claims 4, 6-8, 17 and 19-21 are unpatentable under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, GB '853 and further in view of admitted prior art.

4. Claims 4, 6-8, 17 and 19-21 are unpatentable under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, Hamon and further in view of admitted prior art.

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[1] Citations to English Translation of Record.
[2] Citations to English Translation of Record.
[3] "Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. . . . Whether the rejection is based on "inherency" under 35 U.S.C. § 102, on "prima facie obviousness" under 35 U.S.C. § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products." *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977)

## III. REPRESENTATIVE CLAIM

Claim 1 is representative and reads as follows (underlining and brackets delineating added and removed subject matter, respectively relative to the originally issued claim):

1. A method of manufacturing a modified atmosphere package, comprising:

supplying a first package including a non-barrier portion substantially permeable to oxygen;

placing a retail cut of raw meat within said first package;

sealing said first package;

supplying a second package substantially impermeable to oxygen;

covering said first package with said second package without sealing said second package so as to create a pocket between said first and second packages;

supplying an oxygen scavenger;

activating said oxygen scavenger with [an] a predetermined amount of oxygen scavenger accelerator;

positioning said oxygen scavenger external to said first package such that said oxygen scavenger is capable of absorbing oxygen within said pocket;

removing oxygen from said pocket so as to reduce an oxygen level therein to a non-zero level; and

sealing said second package, said activated oxygen scavenger aggressively absorbing any residual oxygen in said modified atmosphere package so as to reduce the oxygen level from said non-zero level to approximately zero percent,

wherein the activated oxygen scavenger lowers the oxygen level in said package to about 0 percent in less than about 24 hours.

## IV. SNQ ISSUE

In the Reply Brief, Patent Owner newly cites the Federal Circuit decision *Belkin Int'l Inc. v. Kappos*, 696 F.3d 1379 (Fed. Cir. 2012) which issued on October 2, 2012, after their Appeal Brief was filed on February 28, 2012. According to Patent Owner, *Belkin* affirmed the Board's decision not to consider any references that the Director had decided did not form a substantial new question (SNQ) of patentability and they should not be considered here (Reply Br. 2). We addressed this SNQ issue in the related Appeal 2013-1728 ("the '1728 Appeal"). Since we have fully addressed these arguments in the decision in the '1728 Appeal ("the '1728 Decision"), rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here.

## V. OBVIOUSNESS IN VIEW OF WEINKE, SAKAI, & GB '853

### V.A. Claims 1, 10 and 14

There are three independent claims, claims 1, 10, and 14.

Claim 1 is directed to a method of manufacturing a modified atmosphere package. The package is supplied with (1) an oxygen scavenger which (2) is activated with a predetermined amount of oxygen scavenger accelerator. The "oxygen scavenger" serves the purpose to absorb oxygen from the package to reduce the oxygen level ('905 patent, col. 2, ll. 54-57). The "oxygen scavenger accelerator" is used to activate the scavenger to increase the rate at which the oxygen is absorbed (*id.* at col. 2, ll. 57-61). The claim requires that the "activated oxygen scavenger lowers the oxygen level in said package to about 0 percent in less than about 24 hours."

Independent claim 10 is a method claim similar to claim 1 with the same limitation that the "activated oxygen scavenger lowers the oxygen level in said package to about 0 percent in less than about 24 hours."

Independent claim 14 is directed to a "system for removing oxygen from a modified atmosphere package." The package has an oxygen scavenger and oxygen scavenger accelerator "for aggressively absorbing any residual oxygen in said modified package after sealing said second package so as to reduce the oxygen level from said non-zero level to approximately zero percent."

The Examiner found that Weinke describes a packaging system and process for preparing one as recited in claims 1, 10, and 14, but not comprising an oxygen scavenger and oxygen scavenger accelerator. For the latter limitations, the Examiner cited Sakai for its teaching of utilizing a deoxidizer ("oxygen scavenger") "to prevent the oxidation of oxymyoglobin and prevent the meat from becoming brown." (Answer 5.)

The Examiner found that that Sakai teaches "oxygen is reduced to 0.1 % or less within 12 hours after closely sealing the meat together with the deoxidizers." (Answer 5; Sakai, p. 4, ll. 7-10 ("The present invention requires as its element to reduce oxygen concentration in the container to 5 % or less within a specified interval of time, i.e., within 24 hours, preferably to 0.1 % or less within 12 hours, after closely-sealing the meat together with the deoxidizers.").)

For the "oxygen scavenger accelerator," the Examiner cited GB '853 which describes an accelerator "to improve the oxygen absorption ability of oxygen absorbing agent by 5 to 10 times." (Answer 5; GB '853, p. 1, col.

55-60 ("Surprisingly, we have found that the agent according to the present invention, in comparison with the mixture described in J. Clin. Microbiol., possesses a 5 to 10 times better oxygen absorption ability.").) The Examiner concluded:

> Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to include an oxygen scavenger as taught in Sakai in the packaging of Weinke to further ensure optimized prevention of oxidative deterioration resulting from residual oxygen presence. It further would have been obvious to add a predetermined amount of activator (accelerator) to the oxygen scavenger to improve the scavenger's oxygen absorbing ability as disclosed by GB '853 in light of the teachings in Weinke of the importance of rapidly reducing the $O_2$ concentration of the sealed packaged meat in order to preserve color.

(Answer 5-6.)

As to the specific values of oxygen recited in claims 1, 10, and 14, the Examiner relied upon Sakai's teaching of 0.1% or less in 12 hours and the 5 to 10-fold in improvement described in GB '853 (Answer 6).

On pages 12-17 of the Appeal Brief and pages 5-11 of the Reply Brief, Patent Owner argues that the combination of Weinke, Sakai, and GB '853 is improper. The arguments set forth in the Appeal Brief and Reply Brief appear to be substantially the same as those in related Appeal 2013-1728 ("the '1728 Appeal"). Since we have fully addressed these arguments in the '1728 Decision, rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here, specifically, pages 9-21.

Patent Owner also contends "there is no disclosure, teaching or suggestion that the proposed combination of GB '853 and Sakai would

obtain the claimed activity levels." (Appeal Br. 17.) Patent Owner argues that the scavenger in Sakai worked poorly and the "process in GB '853 uses an anaerobic vessel so work required by the oxygen absorbing agent is very minimal to reach the desired oxygen content." (*Id.*) Patent Owner also states that "it is not clear whether the oxygen scavenger system of GB '853, which works for a few minutes in an anaerobic container, would work as claimed in the poorly performing system of Sakai."

Patent Owner cites testimony by Mr. DelDuca to support this position. *See* Third DelDuca Decl. ¶ 16. Mr. DelDuca is a co-inventor of the '250 patent. From 1995, Mr. DelDuca was Technical Manager and/or Technical Sales Manager for the Patent Owner in the area of modified atmosphere packaging (MAP) for meats (First DelDuca Decl. ¶ 2). His responsibilities have included designing, developing, and implementing such modified atmosphere packaging for meat and processes using the same (*id.*). Mr. DelDuca possesses the requisite knowledge expected of one of ordinary skill in the art and thus us is qualified to testify as to the matters in his declaration.

Mr. DelDuca did not provide evidence that the system in GB '853 would not work in a meat package. The PTO does not have the facilities to perform testing.[3] Consequently, all an Examiner can do is provide a

[3] "Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. . . . Whether the rejection is based on "inherency" under 35 U.S.C. § 102, on "prima facie obviousness" under 35 U.S.C. § 103, jointly or alternatively, the burden of proof is the same, and its fairness is

reasonable basis upon which to believe that prior art would perform as claimed, shifting the burden to patent owner to show that it would not. In this case, the specific teachings in GB '853 about the efficacy of its system are adequate to provide the Examiner with a reasonable basis to believe it would work in Weinke and Sakai's meat packing systems, shifting the burden to Patent Owner to show otherwise. These teachings include:

> Surprisingly, we have found that the agent according to the present invention, in comparison with the mixture described in J. Clin. Microbiol., possesses a 5 to 10 times better oxygen absorption ability, referred to the amount of iron.

(GB '853, p. 1, ll. 55-60.)

> For the production of an oxygen-poor or oxygen-free atmosphere, such as is necessary, for example, for culturing anaerobic bacteria, the dry mixture according to the present invention is brought into contact with a reaction mediator.

(GB '853, p. 2, ll. 18-23.)

> After only a few minutes [using a mixture comprising iron powder as an oxygen absorbing agent and citric acid as an activator], a practically oxygen-free atmosphere is produced in the anaerobic vessel.

(GB '853, p. 2, ll. 43-56; p. 1, ll. 69-81).

Patent Owner did not provide adequate rebuttal arguments or evidence. Mr. DelDuca made the statement that there is no "evidence" that GB '853 would achieve the claimed activity levels. We do not agree. To the contrary, the evidence cited above, provides an adequate basis that an

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evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products." *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977) (footnote omitted).

oxygen-free or a practically oxygen-free atmosphere could be accomplished in "only a few minutes."

Mr. DelDuca appeared to imply that the system in GB '853 work[ed] for a few minutes" (Third DelDuca ¶ 16), but there is no indication that the mixture in the GB '853 system depleted the container of oxygen and then stopped working. Mr. DelDuca also did not provide evidence, or a reason with factual underpinnings, as to why a system that worked in anaerobic culture container would not work as well in a sealed meat packaging system. His opinion was that GB '853 would not work in Weinke, but he did not provide a factual basis or reason for holding this opinion. We credit his opinion little weight. Consequently, we do not find Patent Owner's arguments persuasive as to claim 1, or dependent claims 9 and 15 which recite similar limitations. (*See* Appeal Br. 19.)

V.B. Secondary considerations

In making an obviousness determination, secondary considerations must be considered if present. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17-18 (1966); *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333, 1343 (Fed. Cir. 2010). Evidence rebutting a prima face case of obviousness can include evidence of secondary considerations, such as commercial success, long-felt but unresolved needs, and unexpected results. *WMS Gaming, Inc. v. Int'l Game Tech.,* 184 F.3d 1339, 1359 (Fed. Cir. 1999); *In re Soni*, 54 F.3d 746, 750-51 (Fed. Cir. 1995). "When a patent applicant puts forth rebuttal evidence, the Board must consider that evidence." *In re Sullivan*, 498 F.3d 1345, 1351 (Fed. Cir. 2007).

The evidence of secondary considerations put forth in this appeal is the same as in the '1728 Appeal. We fully considered this evidence and found it inadequate to rebut the Examiner's strong case of prima facie obviousness. Rather than repeat our analysis, we refer to the discussion in the '1728 Decision on pages 28-33.

V.C. Summary

After considering the totality of the evidence, we conclude that the preponderance of the evidence establishes that claims 1, 10, and 14 are obvious in view of Weinke, Sakai, and GB '853. The rejection of claims 1, 9, 10, 14, and 15 is affirmed for the reason described above, those of the '1728 Decision, and those given by the Examiner. Patent Owner argued that the dependent claims are patentable for same unpersuasive arguments as for claim 1 and/or did not present separate patentability arguments (Appeal Br. 24-27). We therefore affirm the rejection of claims 2, 3, 5, 11-13, 16, 18 and 22 as obvious in view of Weinke, Sakai, and GB '853.

## VI. OBVIOUSNESS IN VIEW OF WEINKE, SAKAI, GB '853, AND ADMITTED PRIOR ART

The Examiner found that Weinke in view of Sakai and GB '853 "are silent on teaching the claimed method and apparatus for evacuating and/or flushing the pocket and sealing the package as recited in claims 4, 6-8, 13, 17 and 19-21." (Answer 7.) However, the Examiner found that the '905 patent admitted such features were known in the art, and concluded that it would have been obvious to one of ordinary skill in the art to apply these

known features for their known and intended purpose (*id.* at 7-8.) The Examiner's reasoning is fact-based and supported by a preponderance of the evidence. Patent Owner has not identified a deficiency in it, and we find none. As indicated above, the evidence of secondary consideration is insufficient to rebut the strong case of obviousness. We therefore affirm the rejection of claims 4, 6-8, 17, and 19-21 for the reasons set forth by the Examiner (*id.*).

## VII. OBVIOUSNESS IN VIEW OF WEINKE, SAKAI, AND HAMON

The Examiner applied the same rationale for combining Weinke and Sakai as in Rejection 1 (Answer 8-9). The Examiner further found:

> Regarding claims 1, 9-10 and 15, Sakai further discloses that oxygen is reduced to 0.1 % or less within 12 hours after closely sealing the meat together with the deoxidizers. Hamon teaches that the addition of a predetermined amount of activator (accelerator), such as ascorbic acid, to the iron oxygen scavenger improves the oxygen absorption ability of oxygen absorbing agent (See translation). Thus, the addition of the oxygen accelerator and activator suggested by Sakai and Hamon will improve the rate and percentage of oxygen reduction to within those ranges claimed in claims 1, 9-10 and 15.

(Answer 9-10.)

Claims 1 and 10 recites "wherein the activated oxygen scavenger lowers the oxygen level in said package to about 0 percent in less than about 24 hours." As found by the Examiner, the teachings in Sakai and Hamon provide a reasonable basis on which to believe that the Hamon's activated scavenger would achieve the claimed oxygen levels in the recited amount of

time. The following teaching of Sakai is pertinent because it teaches a range which overlaps with the claimed value:

> The present invention requires as its element to reduce oxygen concentration in the container to 5 % or less within a specified interval of time, i.e., within 24 hours, preferably to 0.1 % or less within 12 hours, after closely-sealing the meat together with the deoxidizers.

(Sakai, p. 4, ll. 7-10.)

Hamon provides further evidence that the claimed values would have been reasonably expected by one of ordinary skill in combination with Weinke and Sakai. Patent Owner does not dispute the Examiner's finding that Hamon discloses an oxygen scavenger and activator (Answer 9-10). The Examiner's finding that Hamon's system "will improve the rate and percentage of oxygen reduction" is supported by the evidence (*id.*). The following disclosure in Hamon is pertinent:

> When one is for very sensitive products to oxygen, especially fats or wet products such as mayonnaise, fruit, power solutions, or even glue, this type of absorber is inadequate. Indeed, sensitive products in the development of microorganisms must quickly be in a low oxygen atmosphere. Absorbers must have a rate of absorption of oxygen higher, and in this case a too long residence time in the air can affect their subsequent absorption and thus the system reliability.
>
> Therefore it is advantageous to use oxygen absorbers activated.

(Hamon, p. 1, ll. 39-45)

> The components may be more or less intimately mixed at the time of rupture of the septum, which has the effect of changing the speed of the reaction.
>
> The implementation can be automated, allowing the production of an enhanced rate of reaction.

(Hamon, p. 2, ll. 26-29.)

Patent Owner contends that Weinke combined with Sakai is deficient for substantially the same reasons (Appeal Br. 18-19) argued in the '1728 Appeal. We incorporate by reference the reasoning in the '1728 Decision as to why these arguments are not persuasive (see pages 9-21 of the '1728 Decision).

Patent Owner provided evidence of secondary consideration which is the same as in the '1728 Appeal. We fully considered this evidence and found it inadequate to rebut the Examiner's strong case of prima facie obviousness. Rather than repeat our analysis, we refer to the discussion in the '1728 Decision on pages 28-33.

After considering the totality of the evidence, we conclude that the preponderance of the evidence establishes that claims 1, 10, and 14 are obvious in view of Weinke, Sakai, and Hamon. The rejection of claims 1, 10, and 14 is affirmed for the reason described above, those of the '1728 Decision, and those given by the Examiner. Patent Owner argues that the dependent are patentable for same unpersuasive arguments as for claim 1 (Appeal Br. 24-27). We therefore affirm the rejection of claims 2, 3, 5, 9, 11-13, 15, 16, 18 and 22 as obvious in view of Weinke, Sakai, and Hamon.

## VIII. OBVIOUSNESS IN VIEW OF WEINKE, SAKAI, HAMON, AND ADMITTED PRIOR ART

The Examiner found that Weinke in view of Sakai and Hamon "are silent on teaching the claimed method and apparatus for evacuating and/or flushing the pocket and sealing the package as recited in claims 4, 6-8, 13, 17 and 19-21." (Answer 10.) However, the Examiner found that the '905

patent admitted such features were known in the art, and concluded that it would have been obvious to one of ordinary skill in the art to apply these known features for their known and intended purpose (*id.* at 11.) The Examiner's reasoning is fact-based and supported by a preponderance of the evidence. Patent Owner has not identified a deficiency in it, and we find none. As indicated above, the evidence of secondary consideration is insufficient to rebut the strong case of obviousness. We therefore affirm the rejection of claims 4, 6-8, 13, 17 and 19-21 for the reasons set forth by the Examiner (*id.*).

TIME PERIOD FOR RESPONSE

Requests for extensions of time in this *ex parte* reexamination proceeding are governed by 37 C.F.R. § 1.550(c). See 37 C.F.R. § 41.50(f).

AFFIRMED

alw

Appeal 2013-003339
Reexamination Control 90/011,132
Patent 6,231,905 B1

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PACTIV LLC
Patent Owner and Appellant

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Appeal 2013-001728
Reexamination Control 90/010,976
Patent U.S. 5,698,250
Technology Center 3900

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Before LORA M. GREEN, RICHARD M. LEBOVITZ, and JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal by Patent Owner Pactiv LLC, from the Patent Examiner's rejections of claims 1-7, 9-24, 27, and 30 in this *ex parte* reexamination proceeding. The Board's jurisdiction for this appeal is under 35 U.S.C. §§ 6(b), 134(b), and 306. We affirm.

## I. STATEMENT OF CASE

This appeal involves US 5,698,250 ("the '250 patent") which issued December 16, 1997. The named inventors are Gary R. DelDuca, Alan E. Deyo, Vinod K. Luthra, and Wen P. Wu.

A Request for *Ex Parte* Reexamination of the '250 patent was submitted by a third-party requester, Multisorb Technologies, Inc., on May 4, 2010. Reexamination of the '250 patent was subsequently ordered (Order Granting Request for Reexamination, July 16, 2010). An oral hearing was held April 10, 2013. A transcript was into the record on July 23, 2013.

The real party in interest in this *ex parte* reexamination proceeding is the patent owner, Pactiv LLC (Appeal Br. 2, dated February 28, 2012). Patent Owner states that it is involved in litigation against Multisorb Technologies, Inc. in Civil Action No. 10-cv-07609 (*Pactiv Corporation v. Multisorb Technologies, Inc.*) in the United States District Court, Northern District of Illinois in which U.S. Patent Nos. 6,183,790, 5,698,250, 5,948,457, 5,811,142, 6,231,905, 6,315,921 and 6,395,195 have been asserted.

The present reexamination proceeding is related to the following *ex parte* reexaminations:

(1) Control No. 90/011,128 (US 6,183,790) (Appeal 2013-002087).

(2) Control No. 90/011,131 (US 5,948,457) (Appeal 2013-003338).

(3) Control No. 90/011,130 (US 5,811,142) (Appeal 2013-003324).

(4) Control No. 90/011,132 (US 6,231,905) (Appeal 2013-003339).

(5) Control No. 90/011,596 (US 6,315,921).

(6) Control No. 90/011,597 (US 6,395,195).

Reexaminations (1) to (4) are decided concurrently with this appeal.

The technology in the '250 patent involves packaging for meat. The '250 patent teaches that "[p]ackaging systems which provide extremely low levels of oxygen are generally preferable because it is well known that the fresh quality of meat can be preserved longer under anaerobic conditions than under aerobic conditions." (Col. 1, ll. 36-39.) The '250 patent describes prior art systems in which the atmosphere is evacuated of oxygen and optionally filled with gases other than oxygen to preserve the meat (col. 1, ll. 40-61). "The meat in the modified atmosphere package takes on a less desirable purple-red color which few consumers would associate with freshness. This purple-red color, however, quickly 'blooms' to a bright red color generally associated with freshness when the package is opened to oxygenate the fresh meat by exposure to air." (Col. 1, ll. 61-66.) The '250 patent describes the invention as a packaging system which comprises an oxygen scavenger to substantially absorb residual oxygen in the package that remains after the package is flushed with gases to substantially eliminate the oxygen in the package atmosphere (col. 2, ll. 36-56). The claims are drawn to packaging systems, and methods of making them, comprising an **oxygen scavenger** and also a predetermined amount of an **activator** to increase the rate of oxygen absorption (claims 1, 12, 21, 23; col. 4, ll. 35-39). As explained in the patent, the retail meat is stored in the package, and just prior to display at the grocery store to the consumer, the package is opened and the meat exposed to air (col. 2, ll. 31-33; col. 4, ll. 55-58). The meat is oxygenated and quickly changes or "blooms" to a bright red color (*id.*).

## II. REJECTIONS

Claims 1-7, 9-24, 27, and 30 are pending. Claims 1-7 and 9-24 were originally issued, but as indicated in the claims appendix to the appeal brief, several of the claims were amended during this reexamination proceeding. Claims 27 and 30 were added during reexamination. Patent Owner appeals the Examiner's decision to reject all the pending claims. The claims stand rejected as follows:

l. Claims 1, 7, 10, 12, 13, 15-19, 21, 22, 27 and 30 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,574,642 to Weinke ("Weinke") in view of JP 58-158129 to Sakai ("Sakai")[1] and GB 1,556,853 ("GB '853").

2. Claims 1, 7, 10, 12, 13, 15-19, 21, 22, 27 and 30 under 35 U.S.C. § 103(a) as obvious over Weinke in view of Sakai and EP 468,880 to Hamon[2] ("Hamon").

3. Claims 23 and 24 under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, GB '853 and further in view of U.S. Patent No. 5,247,746 to Johnson ("Johnson").

4. Claims 23 and 24 under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, Hamon and further in view of Johnson.

5. Claims 2-5, 9 and 14 under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, GB '853 and further in view of U.S. Patent No. 4,339,161 to Nakamura ("Nakamura").

6. Claims 2-5, 9 and 14 as unpatentable under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, Hamon and further in view of Nakamura.

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[1] Citations to English Translation of Record.
[2] Citations to English Translation of Record.

7. Claim 6 under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, GB '853, Nakamura in view of U.S. Patent No. 3,700,096 to Reifers ("Reifers") or Johnson.

8. Claim 6 under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, Hamon, Nakamura in view of Reifers or Johnson.

9. Claims 11 and 20 under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, GB '853 in view of U.S. Patent No. 3,419,400 to Hayhurst ("Hayhurst") or U.S. Patent No. 5,064,698 to Courtright ("Courtright").

10. Claims 11 and 20 under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, Hamon in view of Hayhurst or Courtright.

## III. REPRESENTATIVE CLAIM

Claim 1 is representative and reads as follows (underlining and brackets delineating added and removed subject matter, respectively relative to the originally issued claim):

> 1. A modified atmosphere package, comprising:
> an inner container comprised of a polymeric material substantially permeable to oxygen,
> said inner container being configured and sized to fully enclose a retail cut of raw meat;
> an outer container comprised of a polymeric material substantially impermeable to oxygen, said outer container enclosing said inner container, said inner container being removable from at least a portion of said outer container without destroying said inner container, said inner container being differently shaped than said outer container, said outer container being substantially free of oxygen therein in response to said outer container being flushed with one or more gases

> creating a modified atmosphere within said outer container, the outer container including a polymeric bag; and
>
> an oxygen scavenger activated with [an] a predetermined amount of activating agent and positioned external to said inner container to substantially absorb residual oxygen within the modified atmosphere package.

## IV. SNQ ISSUE

In the Reply Brief, Patent Owner newly cites the Federal Circuit decision *Belkin Int'l Inc. v. Kappos*, 696 F.3d 1379 (Fed. Cir. 2012) which issued on October 2, 2012, after their Appeal Brief was filed on February 28, 2012. According to Patent Owner, *Belkin* affirmed the Board's decision not to consider any references that the Director had decided did not form a substantial new question (SNQ) of patentability (Reply Br. 2). Although *Belkin* was an inter partes reexamination, Patent Owner contends that it is pertinent to this *ex parte* reexamination because the statues are comparable (*id.* 2-3). Based on *Belkin*, Patent Owner contends that the Board should not reach the rejections in this appeal because they involve references that were not part of the original SNQ of patentability (*id.* 3-4; ("Specifically, all of the rejections involve references that were not applied in the original SNQ of patentability EP 0698563 to Mize, JP 58158129 to Sakai ('Sakai'), GB 1556853 ('GB '853') or EP 0468880 to Hamon ('Hamon').).

Patent Owner argues "to the extent that any amended, new or substituted claim overcomes the SNQ of patentability, further rejection of those claims based on patentability exceeds the statutory authority granted to the PTO under the reexamination statute." (*Id.* at 4) Patent Owner contends the rejections under the initial SNQ were overcome, and that the case should be remanded to the Examiner to allow the claims (*id.*)

First, we find that *Belkin* involved an *inter partes* reexamination proceeding and therefore is not applicable to this *ex parte* reexamination. We decline to extend a holding in decision on an appeal in a specific inter parte reexamination proceeding to an *ex parte* reexamination proceeding, which was invoked under a different statutory and regulatory regime. *See* 35 USC § 303 (2002) and 37 CFR § 1.510 for Ex Parte Reexamination; 35 USC § 312 (2011) and 37 CFR § 1.913 (2002) for Inter Partes Reexamination.

Nonetheless, we fail to see the applicability of *Belkin*. In *Belkin*, the Examiner had not found an SNQ of patentability for certain publications cited in a Request for *Inter Partes* Reexamination (*id.* at 1382). On appeal to the Board, Belkin challenged the Examiner's failure to make rejections involving the three publications that the Director had determined did not raise a substantial new question of patentability (*id.* at 1383). The Board did not consider the SNQ issue. The court affirmed the Board's decision not to consider the SNQ determination because the SNQ determination in an *inter partes* reexamination is non-appealable as specifically provided for by statute (35 U.S.C. § 312(c)), and should have been raised by a petition to the Director (*id.* at 1385).

This case before us is different. Patent Owner does not challenge the Examiner's decision on the initial SNQ of patentability on which *ex parte* reexamination was ordered. Rather, Patent Owner contends the rejections at issue in the appeal are outside the scope of the initial SNQ because they involve additional prior art publications and therefore should not be decided by the Board. By Patent Owner's own admission, the latter issue was not decided in *Belkin* (Reply Br. 4).

The procedure for appealing an SNQ determination in an *ex parte* reexamination is set forth in the Notice titled "Clarification on the Procedure for Seeking Review of a Finding of a Substantial New Question of Patentability in *Ex Parte* Reexamination Proceedings." 75 Fed. Reg. 36357, June 25, 2010 (the "2010 Notice"), to which the "Delegation of Authority Determination Relating to Substantial New Question of Patentability in an Ex Parte Reexamination Proceeding" of February 6, 2013 (the "2013 Notice") subsequently added. The 2010 Notice delegated authority to the Chief Judge to consider whether the examiner's finding of a substantial new question was appropriate if, for *ex parte* reexaminations ordered after June 25, 2010, Patent Owner first requests reconsideration in front of the Examiner and in its appeal brief. Patent Owner did not avail itself of this procedure, and as explained above, *Belkin* did not create a new basis for requesting review of the substantial new question of patentability determination in an *ex parte* reexamination.

As to the substance of Patent Owner's complaint, we note that an examiner is not barred from making new rejections involving new publications once an *ex parte* reexamination proceeding has been commenced. Indeed, the 2013 Notice contemplates this occurrence and provides for Board review of this issue if properly raised.

Under 37 C.F.R. § 1.550(a), *ex parte* reexamination is conducted in accordance with §§ 1.104 through 1.116. 37 C.F.R. § 1.104(c) provides the procedure for rejecting claims under the initial reexamination. After the initial reexamination under 37 C.F.R. § 1.104, and a reply by the patent owner, the "patent under reexamination will be reconsidered and **again**

**examined**." 37 C.F.R. § 1.112 (emphasis added). Examination is expressly is defined to include the rejection of claims. See 37 C.F.R. § 1.104(c) (§ 1.104 is titled "Nature of examination" and § 1.104(c) is "Rejection of claims"). Consequently, the Examiner, in this case, in making a new rejection after a SNQ had been found, was acting within his statutory authority since § 1.112 requires the claims to be again examined.[3]

## V. REJECTIONS OF CLAIM 1

Claim 1 is rejected as obvious under Grounds 1 and 2.

Claim 1 is directed to a modified atmosphere package comprising [1] an inner container substantially permeable to oxygen configured to enclose raw meat; [2] an outer container substantially impermeable to oxygen and substantially free of oxygen; and [3] "**an oxygen scavenger** activated with a predetermined amount **of activating agent** and positioned external to said inner container to substantially absorb residual oxygen within the modified atmosphere package." (Emphasis added.)

The Examiner relied upon Weinke for its teaching of a modified atmosphere package with inner and outer containers (Answer 4-5). The Examiner found, however, that Weinke does not describe an oxygen scavenger or activating agent. However, the Examiner found that Sakai

[3] During the Oral Hearing, Patent Owner appeared to argue that the Director, not the Examiner must make the initial SNQ determination (Oral Hearing Transcript, p. 14, l to p. 15, l. 3. 37 CFR § 1.515(a) clearly states that the determination is made by the Examiner: "(a) Within three months following the filing date of a request for an ex parte reexamination, an examiner will consider the request and determine whether or not a substantial new question of patentability affecting any claim of the patent is raised . . ."

describes a method preserving raw meat the meat in a gas impermeable container with an oxygen scavenger capable of reducing the oxygen concentration within the container (*id.* at 5). The Examiner further found that GB '853 teaches an oxygen absorber for optimizing the oxygen-free atmosphere necessary to grow anaerobic bacteria (*id.*). The oxygen absorber serves the same purpose as the claimed "oxygen scavenger." The Examiner found that GB '853 teaches that the activity of an oxygen absorber is enhanced by an activator (*id.* 5-6), e.g., where the oxygen absorbing agent is an iron powder and the activator is acetic acid or water (*id.*). The Examiner determined that it would have been obvious to have applied Sakai's and GB '853's teachings to Weinke "because it would enhance the protection provided by the inert gas flushing of Weinke by absorbing any residual oxygen present with the enhanced action of the scavenger preventing the onslaught of oxidative deterioration of the meat." (*Id.* at 6.)

In Ground 2, the Examiner cited Hamon, rather than GB '853, for the same teaching of an oxygen scavenger and activator. (Ans. 10-11.)

V.1. Declaration evidence

Citing Sakai's specific examples in which a deoxidizer ("oxygen scavenger") was used in a meat packaging, Patent Owner contends that one of ordinary skill in the art would not have combined Sakai with Weinke because Sakai's oxygen deoxidizer "performed poorly." (Appeal Br. 14.)

The specific examples referred on pages 5-7 of Sakai compare the effect of two different deoxidizers on oxygen concentration, metmyoglobin content, and color of stored meat. Color is indicated by the a-value, where

the higher the a-value the redder the meat sample (Reply Br. 6-7). The meat was stored in packages. Table 1 of Sakai summarizes the data:

Table 1

| | Experimental Plots | At Start-Up | After 12 Hours | After 1 Day | After 2 Days | After 3 Days | After 10 Days |
|---|---|---|---|---|---|---|---|
| Oxygen Concentration (%) | Example 1 | 20.9 | 0.1 or less | 0.1 or less | 0.1 or less | 0.1 or less | 0.1 |
| | Comparative Example 1 | 20.9 | 11.5 | 0.1 or less | 0.1 or less | 0.1 or less | 0.1 |
| | Comparative Example 2 | 20.9 | 20.5 | 19.0 | 16.0 | 12.5 | 1.5 |
| Carbon Dioxide Gas Concentration (%) | Example 1 | 0.03 | 0.05 | 0.08 | 0.08 | 0.1 | 0.15 |
| | Comparative Example 1 | 0.03 | 0.07 | 0.08 | 0.15 | 0.3 | 0.45 |
| | Comparative Example 2 | 0.03 | 3.0 | 5.0 | 13.0 | 18.0 | 27 |
| Metmyoglobin (%) | Example 1 | 12.3 | - | 96.0 | 69.0 | 38.9 | 30.1 |
| | Comparative Example 1 | 12.3 | - | 84.7 | 85.3 | 68.5 | 33.2 |
| | Comparative Example 2 | 12.3 | - | 55.8 | 67.0 | 89.3 | 78.4 |
| a-Value | Example 1 | 7.8 | - | 5 | 5.7 | 7.2 | 7.7 |
| | Comparative Example 1 | 7.8 | - | 3.9 | 4.6 | 6.9 | 7.6 |
| | Comparative Example 2 | 7.8 | - | 6.4 | 5.3 | 4.0 | 4.9 |

Example 1 uses S-100 deoxidizer; Comparative Example 1 uses Z-100 deoxidizer; and Comparative Example 2 does not use a deoxidizer.

Example 1 (S-100 deoxidizer) showed 96% metmyoglobin content after 1 day, with the oxygen concentration in the package reduced to 0.1% or less. The amount of metmyoglobin was gradually reduced and after ten days it was 30.1% and the red color ("a-value") after ten days was 7.7. The higher the a-value, the more red the meat.

Comparative Example 1 (Z-100 deoxidizer) showed 84.7% metmyoglobin after 1 day, with oxygen concentration reduced to 0.1% or less. The amount of metmyoglobin was gradually reduced and after ten days it was 33.2% and the red color ("a-value") after ten days was 7.6.

Comparative Example 2 (no oxidizer) showed 55.8% metmyoglobin after 1 day, with oxygen concentration at 19%. The metmyoglobin increased and after ten days it was 78.4% and the red color ("a-value") after ten days was 4.9.

After Table 1, Sakai writes:

> Next, as for the color of the meat after opening the package, Example 1 recovered a fresh red color, while Comparative Examples showed little recovery of their colors and remained brownish.

(Sakai, page 6, ll. 16-18.)

Patent Owner contends that Sakai's deoxidizer system performed poorly and would not have been combined by one of ordinary skill in the art with Weinke's meat packaging system (Appeal Br. 14). To support this position, Patent Owner provided declarations by Gary R. DelDuca (First, Second, and Third) and Melvin C. Hunt, Ph.D. Mr. DelDuca is a co-inventor of the '250 patent.[4] From 1995, Mr. DelDuca was Technical Manager and/or Technical Sales Manager for the Patent Owner in the area of modified atmosphere packaging (MAP) for meats (First DelDuca Decl. ¶ 2).

[4] Patent Owner submitted the Hunt Declaration with its Reply Brief, asserting that it "should be entered and considered because the Examiner has raised the above arguments/statements for the first time in the Examiner's Answer. To prevent undue prejudice against the Appellants, the Appellants should be able to present evidence to contradict these statements because there are good and sufficient reasons why the affidavit is necessary and was not earlier presented under 37 C.F.R. § § 41.33 and 41.41." (Reply Br. 5.) The Examiner entered the Reply Brief, along with the Declaration, without comment. (Office Communication, December 18, 2012.) We have considered the declaration since the Examiner entered it into the record, but our doing so, is not a representation or determination that the declaration was properly submitted under §§ 41.33 and 41.41.

His responsibilities have included designing, developing, and implementing such modified atmosphere packaging for meat and processes using the same (*id.*). Dr. Hunt has a Ph.D. in Food Science, and testified that he has "performed numerous research projects in Meat Science and Muscle Biology including major emphasis on pigment chemistry, meat color, meat packaging, and factors effecting microbial soundness." (Hunt Decl. ¶ 1 & 2.) Both declarants worked in the field of the claimed invention and thus possess the requisite knowledge expected of one of ordinary skill in the art. Consequently, we conclude that the declarants are qualified to testify as to the matters in their declarations.

*V.1.A. Mr. DelDuca*

Mr. DelDuca testified:

> The oxygen concentration of Example 1 after 12 hours, after 1 day, after 2 days and after 3 days was 0.1 % or less. See Table 1 at page 6 of Sakai. The metmyoglobin after 1 day in Example 1 was 96.0% and after 2 days was 69.0%. Id. Thus, it is clear that the system using the deoxidizer of Sakai did not reduce oxygen concentration quickly since the metmyoglobin (brown color) was 96% after 1 day.

(Second DelDuca Decl. ¶ 19.)

*V.1.B. Dr. Hunt*

Dr. Hunt testified in his written declaration that the data in Table 1 of Sakai does not support the Examiner's conclusion that Sakai's deoxidizer was successful at recovering the meat's red color ("bloom") when opened (Hunt Dec. 11). We summarize Dr. Hunt's arguments as follows:

*V.1.B.i. Fresh color*

Sakai's Example 1 showed an a-value of 7.7 and a metmyoglobin level of 30.1% after ten days (Sakai, p. 6, Table 1). Sakai states:

> Next, as for the color of the meat after opening the package, Example 1 recovered a fresh red color, while Comparative Examples showed little recovery of their colors and remained brownish.

(Sakai, page 6, ll. 16-18.)

Dr. Hunt testified that "raw meat with 30% brown color cannot be accurately called a 'fresh' red color" and the amount of metmyoglobin in it "could prevent the raw meat from being sold to a consumer." (Hunt Decl. ¶ 11.)

*V.1.B.ii. Comparative Example 1*

Dr. Hunt testified in his written declaration that "Sakai reported similar a-Values [red color of meat] for Example 1 (7.7) and Comparative Example 1 (7.6). See Table 1. This description of the color of meats in Example 1 and Comparative Example 1 is also inconsistent with the a-Values." (Hunt Decl. ¶ 13.)

Dr. Hunt is referring to the statement in Sakai, reproduced above, that "Example 1 recovered a fresh red color, while Comparative Examples showed little recovery of their colors and remained brownish."

In other words, the a-value is about the same for Example 1 and Comparative Example 1, yet Sakai says Example 1 recovered its "fresh red color," but Comparative Example 1 did not.

Comparative Example 1 of Sakai had a similar amount of metmyoglobin after 10 days as Example 1 (compare 33.2% versus 30% in Table 1). Dr. Hunt testified that despite a generally similar amount of metmyoglobin in Example 1 of Sakai, Sakai described Comparative Example 1 "show[ing] little recovery of their colors and remained brownish" as compared to the "fresh" bloomed color of Example 1 (Hunt Decl. ¶ 12.)

Based on this statement, Dr. Hunt testified that description of the color of meats in Example 1 and Comparative Example 1 of Sakai is inconsistent with the metmyoglobin values (*id.*)

*V.1.B.iii. Lack of correlation*

Dr. Hunt testified that there "should be a correlation between the amount of metmyoglobin and the a-Values. But, this is also not consistent in Table 1 of Sakai." (Hunt Decl. 13.) Dr. Hunt observed that at **start up** all the examples had metmyoglobin levels of 12.3% and an a-value of 7.8; however, **after ten days**, Example 1 had a metmyoglobin of 30.1% and an a-value of 7.7 (*id.*) That is the a-values were about the same at start-up and after ten days, while the metmyoglobin varied by almost three-fold.

Dr. Hunt also testified that after one day, Example 1 had a metmyoglobin level of 96%, which is the highest level of metmyoglobin reported in Table 1, yet the a-value is 5 which is not the lowest in the table (Hunt Decl. 13). In other words, since there should be correlation between the metmyoglobin level and the color according to Dr. Hunt, the highest metmyoglobin levels should show the least amount of red color.

*V.1.B.iv. Credibility*

Because of the alleged inconsistencies, Dr. Hunt testified that "the results of Table 1 and descriptions of the same in Sakai are not credible." (Hunt Decl. ¶ 14.)

*V.1.C. Analysis*

First, we shall consider the credibility of Sakai's teachings if Dr. Hunt's statements about the inconsistencies in it are given full weight. For example, Dr. Hunt, as summarized above, identified an alleged lack of

correlation between the amount of metmyoglobin and color of the meat (*V.1.B.iii)*. The question is whether such inconsistencies, when assumed to be true, undermine Sakai's teaching that deoxidizers would be useful to preserve meat in Weinke's package.

To begin, we can't ignore the fact, that despite Dr. Hunt's doubt about Sakai's data in Table 1 (*V.1.B.i.-iv*), Sakai still made strong statements about the benefit of a deoxidizer in promoting a red color upon opening the package:

> According to the present invention, meat is closely-sealed together with deoxidizers, and it is, therefore, possible to make the meat have a freshly reddish tinge caused by oxymyoglobin quickly as soon as the packaging container is opened.

Page 2, lines 5-9.

> The inventors of the present invention and others had conducted the study on a method for closely-sealing meat together with deoxidizers to prevent the meat from discoloration. As a result, it was discovered that the reduction of oxygen concentration in the [sealed] container to a specific value within a specific interval of time [after sealing] made it possible to recreate the red color of meat as a fresh one after opening the container.

Page 2, lines 23-29.

> The deoxidizer used in the present invention is required to be sufficient to reduce oxygen concentration in the sealed container to 5 % or less within 24 hours after closely-sealing the meat. A too-slow-acting deoxidizer is not preferable.

Page 3, lines 4-7.

Sakai's statements are not without support. After ten days, Example 1 **with** deoxidizer shows a package with less than 0.1% oxygen, metmyoglobin content of 30.1%, and an a-value of 7.7, while Comparative Example 2 **without** deoxidizer shows a higher concentration of oxygen at

1.5%, a higher content of metmyoglobin at 78.4%, and a lower a-value of 4.9 (Sakai, p. 6, Table I). Thus, even if Comparative Example 1 is discrepant as testified by Dr. Hunt (see *V.1.B.ii.* above), there is still support for Sakai's conclusion about the benefit of deoxidizers and the statement that deoxidizers "made it possible to recreate the red color of meat as a fresh one after opening the container." (Sakai, p. 2, ll. 23-29.)

Dr. Hunt states that "as shown in Table 1 in Sakai, Example 1 had a metmyogolobin [sic] level after 10 days of 30.1 %. Metmyoglobin is a brown-colored pigment. Thus, raw meat with 30% brown color cannot be accurately called a 'fresh' red color." (Hunt Decl. ¶ 11; see *V.B.1.i* above). However, Sakai states that "[n]ext" after opening the meat package, Example 1 recovered its "fresh red color," indicating alternatively that the color is not the same color (a-value) listed in Table 1, but the color that is recovered **after** the package is opened. In other words, although the metmyoglobin was 30.1%, the meat still bloomed to a red color upon opening the package and exposing the meat to air. Dr. Hunt appeared to equate the values in the package after ten days with the observations made after the package was opened. Indeed, Dr. Hunt did not provide evidence that the metmyoglobin value in Sakai's Table 1 precluded the meat in Example 1 from blooming, exactly as Sakai said it did.

Mr. DelDuca also testified in his written declaration that the test results in Sakai are undesirable because the metmyoglobin levels in Example 1 were high on day 1 and 2, and thus the deoxidizer did not reduce oxygen concentration quickly (see *V.1.A.* above). This argument is not persuasive. As argued by the Examiner, the metmyoglobin level reduces to more than

half by 10 days and, when the package is opened, Sakai states that the meat recovered its fresh red color (Sakai, p. 6, ll. 16-18). Thus, Example 1 clearly obtained the desirable result espoused by Sakai. Moreover, the claims do not require a specific content of metmyoglobin, only that the scavenger is able to "absorb residual oxygen within the modified atmosphere package," a limitation which is clearly satisfied by Sakai since the oxygen concentration in Example 1 is reduced to 0.1% or less by 12 hours.

In sum, while we have considered the testimony of both Dr. Hunt and Mr. DelDuca, we simply do not find that the testimony persuasively undermines the express statements Sakai about the benefit of deoxidizers in recovering the red color of packaged meat. We acknowledge that the declarants identified specific apparent discrepancies in the data collected from the actual experiments performed by Sakai, but despite the data, Sakai still concluded that the meat stored with a deoxidizer recovered its red color. Since there is insufficient reason to doubt the veracity of this statement by Sakai, it is apparent that the data on metmyoglobin and a-values are not completely predictive of the meat color upon opening the package after storage with the deoxidizer, despite apparent discrepancies in metmyoglobin content and color (*V.1.B.iii)*. Indeed, we are not persuaded that the a-value after ten days reflects the meat color when the package is opened and exposed to the air.

V.2. GB '853

The Examiner cited GB '853 for its teaching of an "activating agent" as recited in claim 1. Patent Owner contends that it "is not clear why one skilled in the art would attempt to combine GB '853 with either Weinke or

Sakai for several reasons." (Appeal Br. 16). First, Patent Owner argues that GB '853 is concerned with culturing anaerobic bacteria and has nothing to do with preserving meat (*id.*). To the contrary, Patent Owner argues GB '853 is directed to promoting bacterial growth while Weinke and Sakai would prevent it (*id.*). Second, Patent Owner argues the conditions in GB '853 are different from Weinke, i.e., GB '853 is an anaerobic vessel while Weinke is meat packaging system exposed to air (*id.*). Third, Patent Owner contends that GB '853 focused on the oxygen scavenger, not the activating agent, and used the two in specific ratio's with several other ingredients. Thus, Patent Owner contends that the skilled worker would not have looked to GB '853 as a solution to getting oxygen levels to a low level quickly by the addition of an activating agent. Mr. DelDuca's third declaration provides testimony to support these arguments.

It is true that GB '853 is drawn to a different field of endeavor as Weinke and Sakai. GB '853 describes producing an "an oxygen-poor or oxygen-free atmosphere for culturing anaerobic bacteria." (GB '853, p. 1, ll. 14-16.) The anaerobic atmosphere is produced with oxygen-absorbing agent (*id.* at 16-17), i.e., a scavenger as in claim 1. Despite Patent Owner's contention that the focus is on the oxygen absorbing agent, GB '853 has explicit disclosure that the addition of the activating agent causes removal of oxygen, the same purpose described by Patent Owner.

> For the production of an oxygen-poor or oxygen-free atmosphere, such as is necessary, **for example**, for culturing anaerobic bacteria, the dry mixture [comprising adsorption agent and other ingredients in a ratio] according to the present invention is brought into contact with a reaction mediator.

(GB '853, p. 2, ll. 18-23; emphasis added.)

Even when prior art is not in the same endeavor as the claimed invention, it is still analogous prior art if it is "reasonably pertinent to the particular problem with which the inventor is involved." *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). "A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." *In re Clay*, 966 F.2d at 659, 660 (Fed. Cir. 1992). In this case, with clear statements about the advantages of a scavenger and activator for production of oxygen depleted atmospheres, with anaerobic bacteria as an "example," one of skill in the art would not have read GB '853 so restrictively as to be limited to bacteria culture, but would have recognized its efficacy for other applications in which oxygen depletion was desired. Thus, we are not persuaded that one of ordinary skill in the art would not have found GB '853 pertinent because its main application was for bacteria, using different conditions and vessels than used for meat, and because it described specific ratios for the ingredients used to achieve oxygen depletion. None of these specific teachings detract from the more general disclosure that a scavenger and activator can be used effectively to reduce oxygen in any desired atmosphere. In addition, there is no persuasive evidence that the GB '853 system would not work in the meat package of Weinke.

While, it is true that GB '853 did not suggest the speed of the process to produce meat bloom as argued by Patent Owner (Appeal Br. 17), GB '853 clearly teaches the activator speeds oxygen evacuation: "As soon as the

reaction mediator comes into contact with the oxygen-absorbing agent, the moist mixture begins to absorb the oxygen comparatively quickly . . .." (GB '853, p. 2, ll. 31-34; see also ll. 31-36.) Thus, Patent Owner's contention that the "use of an activating agent to speed the process is not suggested by GB '853, which specifically cites its precise ratio of materials as critical to its functionality, not the fact that it is activated" is not supported factually (Appeal Br. 17).

V.3. HAMON

In a second rejection, the Examiner cited Hamon, rather than GB '853, for the teaching of activation chemicals for enhancing the reducing activity of an oxygen reducing agent, i.e., the activator and oxygen scavenger, respectively of claim 1 (Answer 10-11). Hamon teaches the use of both agents in food packages, providing a reason to have used them in Weinke's system (*id.* at 11).

Patent Owner contends that Hamon is not pertinent to the claimed invention because the claimed invention is concerned with preserving meat, while Hamon's system is for "dried fish, pastries, mayonnaise, fruit, power solutions and glue." (Appeal Br. 19.) Patent Owner argues that the problem of obtaining bloom with meat are different from the problems associated with the products described in Hamon (*id.*). Mr. DelDuca makes the same argument (Third DelDuca Decl. ¶ 19).

The Examiner responded to Patent Owner's argument, acknowledging that Hamon does specifically recite "fresh red meat," but found that the latter is an oxygen-sensitive food product and therefore would be recognized pertinent to meat storage (Answer 15).

The Examiner's position is supported by a preponderance of the evidence. Hamon identifies a general problem for food products sensitive to oxygen:

> Many products will degrade in contact with oxygen in the air and must be kept free of oxygen. In particular, food products are often packaged under vacuum or under an inert atmosphere, because the presence of oxygen [causes them] physical and chemical damage and biological.

(Hamon, p. 1, ll. 4-6.)

Hamon give specific examples of very sensitive products:

> When one is for very sensitive products to oxygen, especially [fatty foods] or wet products such as mayonnaise, fruit, power solutions, or even glue, this type of absorber is inadequate. Indeed, [because] sensitive products in the development of microorganisms must quickly be in a low-oxygen atmosphere. Absorbers must have a rate of absorption oxygen higher, and in this case a too long residence time in the air can affect their subsequent absorption and thus this the system reliability.

(Hamon, p. 1, ll. 39-44.)

However, Patent Owner has not provided persuasive evidence that the disclosure of certain specific examples would have led away from the more general teaching of the use of reducing and activator agents to absorb oxygen in food packaging systems (Hamon, p. 1, ll. 1-3: "The present invention relates to a packaging system for absorbing oxygen and/or relargueurs carbon dioxide, allowing storage and use in optimal conditions.") Patent Owner and Mr. DelDuca argue that raw meat and bloom have special requirements (Appeal Br. 19), but do present evidence that when Hamon system is utilized with

Weinke it would not work to promote bloom or require undue experimentation to do so.

## V.4. PROMOTING LACTIC ACID BACTERIA

Citing Sakai's statement on page 4, lines 21-22, Examiner made statements in the Answer on page 16 that it would have been desirable to promote the growth of lactic acid bacteria on meat. Patent Owner contends this is a new argument not raised before (Reply Br. 5). We do not find this argument necessary to sustain the obviousness rejections. Consequently, we find it moot.

## V.5. SUMMARY

For the foregoing reason, we conclude that the Examiner has set forth sufficient evidence to establish that claim 1 is prima facie obvious under Grounds 1 and 2 listed above.

## VI. REJECTIONS OF CLAIMS 12, 21, 27, 30, AND OTHERS

Claims 12, 21, 27, and 30 stand rejected under Grounds 1 and 2.

Patent Owner argues that independent claims 12 and 21 would not have been obvious to one of ordinary skill in the art in view of Weinke, Sakai, GB '853, Hamon, or any of the other cited combinations of prior art (Appeal Br. 25). Claims 12 and 21 are method claims and comprise the step of "activating said oxygen scavenger with a predetermined amount of activating agent, wherein the activated oxygen scavenger lowers the oxygen

level in said package to less than about 0.05 percent in less than about 2 hours."

V1.A. Sakai and GB '853

Sakai shows that after 12 hours, the oxygen in the packaging was reduced from 20.9% to 0.1% or less using a deoxidizer alone (p. 6, Table 1, Example 1; p. 4, ll. 11-12). GB '853 teaches that when the activator and oxygen absorbing agent are added, "[a]fter only a few minutes, a practically oxygen-free atmosphere is produced in the anaerobic vessel." (GB '853, p. 2, ll. 54-56.) GB '853 thus teaches a time interval and oxygen level that falls within the scope of the recited limitation of claims 12 and 21. Mr. DelDuca contends that there is no evidence that the oxygen scavenger system of GB '853 would work as claimed in Sakai's "poorly performing" system (Third DelDuca Decl. ¶ 18). However, GB '853 describes a combination of scavenger and activator that meets the limitations of claims 12 and 21. The Examiner gave a reason why it would have been obvious to have used the combination in Weinke. Mr. DelDuca did not provide sufficient evidence as to why GB '853's system would not work in Weinke's meat packaging system, when GB '853 is disclosed to work so efficiently. Consequently, we do not find that Mr. DelDuca's testimony persuasive. Accordingly, we conclude that the Examiner's prima facie case of obvious for claims 12 and 21 is supported by a preponderance of the evidence.

Claims 27 and 30 depend on claims 12 and 21, respectively, and recite "wherein the activated oxygen scavenger lowers the oxygen level in said package to about 0 percent in less than about 2 hours." (See Appeal Br. 31 and 32.) For the same reasons discussed above, we conclude that the

Examiner provided sufficient evidence to establish that the claims are prima facie obvious in view of Weinke, Sakai, and GB '853.

VI.B. Sakai and Hamon

Mr. DelDuca makes the same argument for the rejection based on Hamon (Third DelDuca Decl. ¶ 22.) In this case, while Hamon refers to "absorbing oxygen" and "oxygen uptake" (Hamon, Description, p. 1, ll. 1-3), Hamon does not identity a time interval and oxygen level achieved by its system comprising an oxygen scavenger and activator. Accordingly, we shall reverse the rejection of claims 12 and 21.

For similar reasons, we also reverse the rejection of dependent claims 13-20 and 22, as obvious in view of 2) Weinke, Sakai, and Hamon; 6) Weinke, Sakai, Hamon, and Nakamura; and 10) Weinke, Sakai, Hamon, Hayhurst, and Courtright.

Claims 27 and 30 depend on claims 12 and 21, respectively, and recite "wherein the activated oxygen scavenger lowers the oxygen level in said package to about 0 percent in less than about 2 hours." (See Appeal Br. 31 and 32.) We reverse the rejection over the combination of Weinke, Sakai, and Hamon, for the reasons already discussed above.

VI.C. Summary

We reverse the rejection of claim 12, 21, 27, and 30 under Ground 2; and of claims 13-20 and 22, which depend on claims 12 and 21, under Grounds 2, 6, and 10.

## VII. REJECTIONS OF CLAIMS 23 AND 24

Claims 23 and 24 stand rejected as obvious in view of Weinke, Sakai, GB '853, and Johnson (Ground 3); and as obvious in view of Weinke, Sakai, Hamon, and Johnson (Ground 4).

Claim 23 is directed to a modified atmosphere packaging system comprising, inter alia, means for sealing the containers and removing oxygen. The means for removing oxygen identified in the '250 Patent includes the gas flushing steps along with the oxygen scavenger and activator. (Col. 4, line 59 – col. 6, line 19; App. Br. 6-7.) The Examiner found that the combination of Weinke, Sakai, and GB '853 or Hamon is "silent regarding the specifics of the system for forming the packages," and cited Johnson for describing such limitations (Answer 10). The Examiner concluded that it would have been obvious to have utilized Johnson's system for creating the claimed packaging system "because an automated system would optimize packaging time." (*Id.*)

Patent Owner contends that Johnson does not address the presence of an oxygen scavenger and activator, the same argument found unpersuasive for claim 1. We thus conclude that the Examiner provided sufficient evidence to establish that claims 23 and 24 are prima facie obvious.

## VIII. REJECTION OF CLAIMS 2, 4-7, 9-11, 13-20, and 22

### VIII.A. Sakai and GB '853

Claims 2, 4-7, 9-11, 13-20, and 22 are rejected as obvious under Grounds 1, 5, 7, and 9. Patent Owner argues that the claims are patentable for the same reason we found deficient for claim 1 (Appeal Br. 29, 31, and

32). Consequently, we conclude that the claims are prima facie obvious for the reasons stated by the Examiner.

VIII.B. Sakai and Hamon

Claims 2, 4-7, 9-11, 13-20, and 22 are rejected as obvious under Grounds 2, 6, 8, and 10. Claims 13-20 and 22 are dependent on claims 12 and 21, which we found not to be obvious in view of the cited prior art, and reversed the rejections based on them (see VI.B). For claims 2, 4-7, and 9-11, Patent Owner argues that the claims are patentable for the same reason we found deficient for claim 1 (Appeal Br. 29, 31, and 32). Consequently, we conclude that claims 2, 4-7, and 9-11 are prima facie obvious for the reasons stated by the Examiner.

IX. REJECTION OF CLAIM 3

Claim 3 stands rejected under Grounds 5 and 6.

Claim 3 is directed to the package of claim 1, where the inner container is formed of a tray and a cover, and the tray is comprised of polystyrene foam. The Examiner cited Nakamura for its teaching of a useful food tray formed from polystyrene (Answer 7). Mr. DelDuca testified:

> [P]ackaging systems that only use oxygen evacuation techniques cannot remove trapped oxygen that diffuses from foam trays, which are used in some raw meat packaging systems. Trays, such as polystyrene foam trays, have a substantial amount of oxygen contained in its cellular structure that results in a time period of as long as about 5 to about 6 days to diffuse the oxygen contained in its cellular structure.

(First DelDuca Decl. ¶ 8.)

The rejections of claim 3 are based on further utilizing an oxygen scavenger and activator, as taught by Sakai, GB '853, and Hamon, to "substantially absorb residual oxygen with the modified package container." Mr. DelDuca in paragraph 8 of his declaration did not address these publications which are part of the rejection. Likewise, Mr. DelDuca describes deficiencies in the Nakamura publication in paragraphs 10-13 of his first declaration, but does not address the specific teachings of Sakai, GB '853, and Hamon which the Examiner cited to enhance oxygen depletion in the polystyrene foam tray of Nakamura. Consequently, Mr. DelDuca's declaration does not address the complete basis of the rejection as set forth by the Examiner. Patent Owner states that GB '853 nor Hamon would work with polystyrene tray, but has not provide any objective evidence of why failure would have been expected (Appeal Br. 30-31), when both prior art systems are said to be effective, providing a reasonable basis on which to conclude that a combination of oxygen scavenger and activator would be effective in depleting oxygen. Consequently, we conclude that a preponderance of the evidence supports the prima facie obviousness rejection of claim 3 under Grounds 5) and 6).

## X. SECONDARY CONSIDERATIONS

In making an obviousness determination, secondary considerations must be considered if present. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17-18 (1966); *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333, 1343 (Fed. Cir. 2010). Evidence rebutting a prima face case of obviousness can include evidence of secondary considerations, such as commercial success,

long-felt but unresolved needs, and unexpected reuslts. *WMS Gaming, Inc. v. Int'l Game Tech.,* 184 F.3d 1339, 1359 (Fed. Cir. 1999); *In re Soni*, 54 F.3d 746, 750-51 (Fed. Cir. 1995). "When a patent applicant puts forth rebuttal evidence, the Board must consider that evidence." *In re Sullivan*, 498 F.3d 1345, 1351 (Fed. Cir. 2007).

The presence of secondary considerations are not dispositive. There are numerous cases in which objective considerations of non-obviousness, including unexpected results, substantial evidence of commercial success, praise, copying, and licensing, were inadequate to overcome a strong case of prima facie obviousness. *Asyst Techs., Inc. v. Emtrak*, Inc., 544 F.3d 1310, 1316 (Fed. Cir. 2008) ("[E]vidence of secondary considerations does not always overcome a strong prima facie showing of obviousness."); *Leapfrog Enters. Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007); *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004); *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1483-1484 (Fed. Cir. 1997).

X.A. LONG FELT NEED

Patent Owner contends that the problem of obtaining consistent blooming with retail cuts of pigment-sensitive raw meats has been present for many years (Appeal Br. 18 and 20-21). However, the main evidence cited by Patent Owner for this is the fact is the passage of time between the publications (id.).

It is well-established that "[a]bsent a showing of long-felt need or the failure of others, the mere passage of time without the claimed invention is not evidence of nonobviousness." *Iron Grip Barbell Co. v. USA Sports,*

*Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004); *accord In re Kahn*, 441 F.3d 977, 990-91 (Fed. Cir. 2006). Consequently, the fact that no one combined these publications before is insufficient by itself to establish not obviousness of the claimed invention. Indeed, both Weinke and Sakai purported to solve the problem of bloom. Patent Owner did not provide objective evidence that either these approaches failed. Mr. DelDuca's testimony provides no objective evidence of a long-felt need solved by the present invention; but merely states that such a need was addressed by the claimed system (Third DelDuca Decl. ¶ 25).

X.B. COPYING

Patent Owner contends that at least two companies have copied the claimed invention (Appeal Br. 21). However, Patent Owner has not provided objective evidence that copying occurred. The Complaint filed in the United States District Court of the Northern District of Illinois (Exhibit 4) provided by Patent Owner states their position that two companies have infringed Patent Owner's patents, including the '250 patent, but the complaint does not provide evidence of copying. Patent Owner contends that complaint is sufficient to establish copying since the evidence of such would not be accessible to them except through discovery and the complaint, itself, is sufficient because of Rule 11 obligations (Reply Br. 12-13). However, Patent Owner has not pointed to a statement in the Complaint where the attorney made a statement the alleged infringers had copied the products of the '250 patent.

Contrary to Patent Owner's contention, the Federal Circuit has required evidence of copying:

> Not every competing product that arguably falls within the scope of a patent is evidence of copying. Otherwise every infringement suit would automatically confirm the nonobviousness of the patent. Rather, copying requires the replication of a specific product. This may be demonstrated either through internal documents, *see Akamai Techs., Inc. v. Cable & Wireless Internet Servs., Inc.*, 344 F.3d 1186, 1196-97 (Fed. Cir. 2003); direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a virtually identical replica, *see Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1285 (Fed. Cir. 2000); or access to, and substantial similarity to, the patented product (as opposed to the patent), *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1027 (Fed. Cir. 1985), *overruled on other grounds by*, *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1359 (Fed. Cir. 1999) (en banc)

*Iron Grip*, 392 F.3d 1317 at 1325.

Thus, we are not persuaded by Patent Owner's mere allegation that te claimed packaging system was copied.

## X.C. UNEXPECTED RESULTS

Patent Owner provides evidence of testing performed using Multiform's MRM 100 scavenger packet that was activated using an oxygen scavenger accelerator (Appeal Br. 22). The experiment showed that the activator in combination with the scavenger reduced the percent oxygen in the environment in one hour, while the scavenger alone took 20 hours (*id.*). Patent Owner found that the "results using Multiform's MRM 100 scavenger packet by activating using an oxygen scavenger accelerator produced a desirable result in that the retail cut of raw meat did not tum to an

unacceptable brown color (metmyoglobin)." (*Id.*) See also data described on page 23 of Appeal Brief. According to Mr. DelDuca:

> This was a surprising and unexpected result since those skilled in the art believed that oxygen scavengers could not be used with retail cuts of raw meat because the activation times were too slow to prevent the raw meat from turning metmyoglobin.

(Third DelDuca Decl. ¶ 24.)

Mr. DelDuca's testimony is not persuasive. As stated in the '250 patent, the "packaging system effectively extends the allowable time period between cutting and purchase of retail cuts of raw meat" ('250 patent, col, 2, ll. 31-33) such that when the retail meat is removed from the package "prior to being displayed at the grocery store," the raw meat "blooms" to the "generally acceptable bright red color" (*id.* at col. 4, col. 55-58). Sakai teaches that method for preserving meat using deoxidizers, making it "possible to make the meat have a freshly reddish tinge caused by oxymyoglobin quickly as soon as the packaging container is opened." (Sakai, p. 2, ll. 5-8.) Thus, contrary, to Mr. DelDuca's testimony, there was a reasonable expectation that an oxygen scavenger could, under storage conditions, preserve the meat's red color when opened. Both GB '253 (p. 2, ll. 31-34) and Hamon teach that the activating agent enhances the activity of the oxygen scavenger in depleting the environment of oxygen (see also Answer 16). Thus, it would also have been expected that an activator would enhance the activity of the scavenger, alone, the same result described by Mr. DelDuca. Mr. DelDuca's testimony did not discuss the results in the context of the teachings of Sakai, GB '253, and Hamon, and thus we give his statements about unexpected results little weight.

Patent Owner argues that neither GB '853 nor Hamon had anything to do with the storage of retail meats and thus the unexpected results "would clearly not be contradicted by" these references (Reply Br. 13). We do not find this argument persuasive. First, Hamon is in the same field of endeavor as Weinke and the claimed invention, and thus its teachings are clearly pertinent to the expectations of one of ordinary skill. Second, while GB '853 does not expressly describe its system of an activator and oxygen scavenger for food storage, its efficacy in oxygen depletion would have commanded the attention of one of ordinary skill in the art because of its relevance to meat storage, which has the same desired result of eliminating oxygen from a container ('250 patent, col. 1, ll. 33-45).

## X.D. COMMERCIAL SUCCESS

Patent Owner contends that Pactiv's ActiveTech® meat packages, systems and processes of the same have been commercially successful (Appeal Br. 24). Patent Owner states: "Specifically, the biggest protein processors in the U.S. in partnership with the biggest retailers have relied on Pactiv's ActiveTech® meat packages, systems and processes of the same." (*Id.*) In order to overcome a finding of obviousness by demonstrating commercial success, "[a] nexus between commercial success and the claimed features is required." *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.,* 229 F.3d 1120, 1130 (Fed. Cir. 2000). In this case, Patent Owner has not provided evidence of a nexus between the claimed invention and Pactiv's ActiveTech® meat packages. Mr. DelDuca stated that the patent claims covered the commercial products, but did not provide

sufficient evidence of such nor that the reason for the success was due to a feature recited in the claim, rather than unclaimed feature or marketing or business strategies. In addition to this, Patent Owner has not provided market data, sales figures, or any other information upon which it could be determined that the packages were commercial successful. See. *Tec Air, Inc. v. Denso Mfg. Mich., Inc.*, 192 F.3d 1353, 1361 (Fed. Cir. 1999); *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996); see also Answer 16-17.

## SUMMARY

After considering the totality of the evidence before us, we concluded that the claimed subject matter of claims 1-7, 9-24, 27, and 30 would have been obvious to one of ordinary skill in the art based on the prior art cited by the Examiner for the reasons discussed above. The evidence of non-obviousness summarized in Section X is insufficient to overcome the strong case of obviousness put forth by the Examiner. *See Asyst,* 544 F.3d at 1316; *Leapfrog*, 485 F.3d at 1162; *Iron Grip Barbell*, 392 F.3d at 1324; *Richardson-Vicks*, 122 F.3d at 1483-1484.

## TIME PERIOD FOR RESPONSE

Requests for extensions of time in this *ex parte* reexamination proceeding are governed by 37 C.F.R. § 1.550(c). See 37 C.F.R. § 41.50(f).

## AFFIRMED

Appeal 2013-001728
Reexamination Control 90/010,976
Patent 5,698,250

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PACTIV LLC
Patent Owner and Appellant

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Appeal 2013-003338
Reexamination Control 90/011,131
Patent U.S. 5,948,457
Technology Center 3900

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Before LORA M. GREEN, RICHARD M. LEBOVITZ, and JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal by Patent Owner Pactiv LLC, from the Patent Examiner's rejections of claims 1-7, 9-11, 13-17, and 20-23 in this *ex parte* reexamination proceeding. The Board's jurisdiction for this appeal is under 35 U.S.C. §§ 6(b) and 306. We affirm.

## I. STATEMENT OF CASE

This appeal involves US 5,948,457 ("the '457 patent") which issued September 1. The named inventors are Gary R. DelDuca, Alan E. Deyo, Vinod K. Luthra, and Wen P. Wu.

A Request for *Ex Parte* Reexamination of the '457 patent was made by a third-party requester, Multisorb Technologies, on September 7, 2010. Reexamination of the '457 patent was subsequently ordered (Order Granting Request for Reexamination, October 19, 2010). An oral hearing was held April 10, 2013. A transcript was into the record on July 23, 2013.

The real party in interest in this *ex parte* reexamination proceeding is the patent owner, Pactiv LLC (Appeal Br. 2, dated February 28, 2012). Patent Owner states that it is involved in litigation against Multisorb in Civil Action No. 10-cv-07609 (Pactiv Corporation v. Multisorb Technologies, Inc.) in the United States District Court, Northern District of Illinois in which U.S. Patent Nos. 6,183,790, 5,698,250, 5,948,457, 5,811,142, 6,231,905, 6,315,921 and 6,395,195 have been asserted.

The present reexamination proceeding is related to the following *ex parte* reexaminations:

(1) Control No. 90/011,128 (US 6,183,790) (Appeal 2013-002087).

(2) Control No. 90/010,976 (US 5,698,250) (Appeal 2013-001728).

(3) Control No. 90/011,130 (US 5,811,142) (Appeal 2013-003324).

(4) Control No. 90/011,132 (US 6,231,905) (Appeal 2013-003339).

(5) Control No. 90/011,596 (US 6,315,921).

(6) Control No. 90/011,597 (US 6,395,195).

Reexaminations (1) to (4) are decided concurrently with this appeal.

## II. REJECTIONS

Claims 1-7, 9-11, 13-17, and 20-23 are pending (Appeal Br. 3). Claims 1-17 are original claims and claims 20-23 were added in the Response to Ex Parte Reexamination Communication of December 21, 2010, which was filed with the PTO on February 4, 2011 (*id.* at 2). Claims 1, 10, 16, and 17 are the independent claims and were amended during the reexamination proceeding (*id.*). Patent Owner appeals the Examiner's decision to reject the claims. The grounds of rejections to be reviewed on appeal are as follow:

1. Claims 1-6, 9-11, 13-17 and 20-23 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,574,642 to Weinke ("Weinke") in view of JP 58-158129 to Sakai[1] ("Sakai") and GB 1,556,853 ("GB '853").

2. Claims 1-6, 9-11, 13-17 and 20-23 under 35 U.S.C § 103(a) as obvious over Weinke in view of Sakai and EP 0468880 to Hamon[2] ("Hamon").

3. Claim 7 under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, GB '853 and further in view of U.S. Patent No. 3,419,400 to Hayhurst ("Hayhurst") or U.S. Patent No. 5,064,698 to Courtright ("Courtright").

4. Claim 7 under 35 U.S.C. § 103(a) as obvious over Weinke, Sakai, Hamon and further in view of Hayhurst and Courtright.

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[1] Citations to English Translation of Record.
[2] Citations to English Translation of Record.

## III. REPRESENTATIVE CLAIMS

Claims 1 and 17 are representative and read as follows (underlining and brackets delineating added and removed subject matter, respectively relative to the originally issued claim):

> 1. A modified atmosphere package comprising first and second compartments separated by a partition member, said partition member including a non-barrier portion substantially permeable to oxygen, said first and second compartments being encompassed by an outer wall substantially impermeable to oxygen, said outer wall including a plastic bag, said first compartment being substantially free of oxygen in response to substantially removing the oxygen from said pocket and introducing one or more gases creating a modified atmosphere within said first compartment, said first compartment containing an oxygen scavenger activated with [an] a predetermined amount of oxygen scavenger accelerator to substantially absorb residual oxygen within said first compartment, said second compartment containing a retail cut of raw meat.
>
> 17. A method of manufacturing a modified atmosphere package, said method comprising the steps of:
>
> supplying a first package including a non-barrier portion substantially permeable to oxygen;
>
> placing a retail cut of raw meat within said first package;
>
> sealing said first package;
>
> supplying a second package substantially impermeable to oxygen;
>
> covering said first package with said second package without sealing said second package so as to create a pocket between said first package and said second package;
>
> substantially removing oxygen from said pocket and introducing one or more gases into said pocket to create a modified atmosphere therein;
>
> supplying an oxygen scavenger positioned external to said first package to absorb residual oxygen within said pocket;

> activating said oxygen scavenger with [an] a predetermined amount of oxygen scavenger accelerator, the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 90 minutes; and
>
> sealing said second package.

## IV. SNQ ISSUE

In the Reply Brief, Patent Owner newly cites the Federal Circuit decision *Belkin Int'l Inc. v. Kappos*, 696 F.3d 1379 (Fed. Cir. 2012) which issued on October 2, 2012, after their Appeal Brief was filed on February 28, 2012. According to Patent Owner, *Belkin* affirmed the Board's decision not to consider any references that the Director had decided did not form a substantial new question (SNQ) of patentability and they should not be considered here (Reply Br. 2). We addressed this SNQ issue in the related Appeal 2013-1728 ("the '1728 Appeal"). Since we have fully addressed these arguments in the decision in the '1728 Appeal ("the '1728 Decision"), rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here.

## V. OBVIOUSNESS IN VIEW OF WEINKE, SAKAI, AND GB '853

Independent claims 1, 10, 16, and 17 stand rejected as obvious over the combination of Weinke, Saki, and GB '853 (Rejection 1).

### V.A. Claims 1, 10, and 16

Claim 1 is directed to a modified atmosphere package for a retail cut of meat comprising "an oxygen scavenger activated with a predetermined

amount of oxygen scavenger accelerator to substantially absorb residual oxygen within said first compartment." Claim 16 is also drawn to a modified atmosphere package with a similar limitation.

Claim 10 is directed to a method of manufacturing a modified atmosphere package for a retail cut of meat comprising a step of "activating said oxygen scavenger with a predetermined amount of oxygen scavenger accelerator."

The Examiner found that Weinke describes a packaging system and a method manufacturing one as recited in claims 1, 10, and 16, but not comprising an oxygen scavenger and oxygen scavenger accelerator. For the latter limitations, the Examiner cited Sakai for its teaching of utilizing a deoxidizer ("oxygen scavenger") "to prevent the oxidation of oxymyoglobin and prevent the meat from becoming brown." (Answer 5.)

The Examiner found that that Sakai teaches "oxygen is reduced to 0.1 % or less within 12 hours after closely sealing the meat together with the deoxidizers." (Answer 5; Sakai, p. 4, ll. 7-10 ("The present invention requires as its element to reduce oxygen concentration in the container to 5 % or less within a specified interval of time, i.e., within 24 hours, preferably to 0.1 % or less within 12 hours, after closely-sealing the meat together with the deoxidizers.").)

For the "oxygen scavenger accelerator," the Examiner cited GB '853 which describes an accelerator "to improve the oxygen absorption ability of oxygen absorbing agent by 5 to 10 times." (Answer 5; GB '853, p. 1, col. 55-60 ("Surprisingly, we have found that the agent according to the present invention, in comparison with the mixture described in J. Clin. Microbiol.,

possesses a 5 to 10 times better oxygen absorption ability.").) The Examiner concluded:

> Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to include an oxygen scavenger as taught in Sakai in the packaging of Weinke to further ensure optimized prevention of oxidative deterioration resulting from residual oxygen presence. It further would have been obvious to add a predetermined amount of activator (accelerator) to the oxygen scavenger to improve the scavenger's oxygen absorbing ability as disclosed by GB '853 in light of the teachings in Weinke of the importance of rapidly reducing the $O_2$ concentration of the sealed packaged meat in order to preserve color.

(Answer 5-6.)

On pages 12-17 of the Appeal Brief and pages 5-10 of the Reply Brief, Patent Owner argues that the combination of Weinke, Sakai, and GB '853 is improper. The arguments set forth in the Appeal Brief and Reply Brief appear to be substantially the same as those in the '1728 Appeal. Since we have fully addressed these arguments in the decision in the '1728 Appeal, rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here, specifically, pages 9-21.

V.B. Claim 17 and dependent claims

Claim 17 is a method claim, but its "activating" step is narrower than in claim 10, reciting that "the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 90 minutes."

Patent Owner also contends "there is no disclosure, teaching or suggestion that the proposed combination of Weinke, GB '853 and Sakai would obtain the claimed activity levels" recited in claim 17 (Appeal Br. 25.) Patent Owner argues that the scavenger in Sakai worked poorly and the "process in GB '853 uses an anaerobic vessel so work required by the oxygen absorbing agent is very minimal to reach the desired oxygen content." (*Id.*) Patent Owner also states that "it is not clear whether the oxygen scavenger system of GB '853, which works for a few minutes in an anaerobic container, would work as claimed in the poorly performing system of Sakai." Patent Owner cites testimony by Mr. DelDuca[3] to support this position. *See* Third DelDuca Decl. ¶ 16.

Mr. DelDuca did not provide evidence that the system in GB '853 would not work in a meat package. The PTO does not have the facilities to perform testing.[4] Consequently, all an Examiner can do is provide a

---

[3] Mr. DelDuca is a co-inventor of the '250 patent. From 1995, Mr. DelDuca was Technical Manager and/or Technical Sales Manager for the Patent Owner in the area of modified atmosphere packaging (MAP) for meats (First DelDuca Decl. ¶ 2). His responsibilities have included designing, developing, and implementing such modified atmosphere packaging for meat and processes using the same (*id.*). Mr. DelDuca worked in the field of the claimed invention and thus possesses the requisite knowledge expected of one of ordinary skill in the art. Consequently, we conclude that he is qualified to testify as to the matters in his declaration,.

[4] "Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. . . . Whether the rejection is based on "inherency" under 35 U.S.C. § 102, on "prima facie obviousness" under 35 U.S.C. § 103, jointly or alternatively, the burden of proof is the same, and its fairness is

reasonable basis upon which to believe that prior art would perform as claimed, shifting the burden to patent owner to show that it would not. In this case, the specific teachings in Sakai about its oxygen scavenger, and GB '853 about the efficacy of its system, are adequate to provide the Examiner with a reasonable basis to believe that GB '853 would work in Weinke and Sakai's meat packing systems, shifting the burden to Patent Owner to show otherwise. These teachings include:

> Surprisingly, we have found that the agent according to the present invention, in comparison with the mixture described in J. Clin. Microbiol., possesses a 5 to 10 times better oxygen absorption ability, referred to the amount of iron.

(GB '853, p. 1, ll. 55-60.)

> For the production of an oxygen-poor or oxygen-free atmosphere, such as is necessary, for example, for culturing anaerobic bacteria, the dry mixture according to the present invention is brought into contact with a reaction mediator.

(GB '853, p. 2, ll. 18-23.)

> After only a few minutes [using a mixture comprising iron powder as an oxygen absorbing agent and citric acid as an activator], a practically oxygen-free atmosphere is produced in the anaerobic vessel.

(GB '853, p. 2, ll. 43-56; p. 1, ll. 69-81).

Patent Owner did not provide adequate rebuttal arguments or evidence. Mr. DelDuca made the statement that there is no "evidence" that GB '853 would achieve the claimed activity levels. We do not agree. To the contrary, the evidence cited above, provides an adequate basis that an

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evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products." *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977) (footnote omitted).

oxygen-free or a practically oxygen-free atmosphere could be accomplished in "only a few minutes", which overlaps with the claimed value of "the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 90 minutes."

Mr. DelDuca appeared to imply that the system in GB '853 work[ed] for only a few minutes (Third DelDuca ¶ 16), but there is no indication that the mixture in the GB '853 system depleted the container of oxygen and then stopped working. Mr. DelDuca also did not provide evidence, or a reason with factual underpinnings, as to why a system that worked in anaerobic culture container would not work as well in a sealed meat packaging system. His opinion was that GB '853 would not work in Weinke, but he did not provide a factual basis or reason for holding this opinion. We credit his opinion little weight. Consequently, we do not find Patent Owner's arguments persuasive as to claim 17, or dependent claims 5, 15, and 20-23 which recite similar limitations.

V.C. Secondary considerations

In making an obviousness determination, secondary considerations must be considered if present. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17-18 (1966); *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333, 1343 (Fed. Cir. 2010). Evidence rebutting a prima face case of obviousness can include evidence of secondary considerations, such as commercial success, long-felt but unresolved needs, and unexpected results. *WMS Gaming, Inc. v. Int'l Game Tech.,* 184 F.3d 1339, 1359 (Fed. Cir. 1999); *In re Soni*, 54 F.3d 746, 750-51 (Fed. Cir. 1995). "When a patent applicant puts forth

rebuttal evidence, the Board must consider that evidence." *In re Sullivan*, 498 F.3d 1345, 1351 (Fed. Cir. 2007).

The evidence of secondary considerations put forth in this appeal is the same as in the '1728 Appeal. We fully considered this evidence and found it inadequate to rebut the Examiner's strong case of prima facie obviousness. Rather than repeat our analysis, we refer to the discussion in the '1728 Decision on pages 28-33.

V.D. Summary

After considering the totality of the evidence, we conclude that the preponderance of the evidence establishes that claims 1, 10, 16, and 17, and dependent claims 5, 15, and 20-23, are obvious in view of Weinke, Sakai, and GB '853. The rejection of claims 1, 10, 16, and 17, and dependent claims 5, 15, and 20-23 is affirmed for the reason described above, those on pages xx of the '1728 Decision, and those given by the Examiner. Patent Owner argued that dependent claims 2-6, 9, 11, 13, and 14 are patentable for same unpersuasive arguments as for claim 1 and/or did not present separate patentability arguments (Appeal Br. 27-27). We therefore affirm the rejection of claims 2-6, 9, 11, 12, and 14 as obvious in view of Weinke, Sakai, and GB '853.

VI. OBVIOUSNESS IN VIEW OF WEINKE, SAKAI, AND HAMON

VI. A. Claims 1-4, 6, 9-11, and 13, 14, and 16

For the combination of Weinke and Sakai, the Examiner applied the same rationale for rejecting claims 1-4, 6, 9-11, and 13, 14, and 16 as in

Rejection 1 (Answer 7-8). The Examiner further found that Hamon "discloses that the activators speed up the rate of oxygen absorption." (*Id.* at 9.) Based on Hamon's teaching, the Examiner concluded:

> [I]t further would have been obvious to add a predetermined amount of activator (accelerator) to the oxygen scavenger to improve the scavenger's oxygen absorbing ability as disclosed by Hamon in light of the teachings in Weinke of the importance of rapidly reducing the $O_2$ concentration of the sealed packaged meat in order to preserve color.

(Answer 9.)

On pages 17-19 of the Appeal Brief and pages 10-11 of the Reply Brief, Patent Owner argues that the combination of Weinke, Sakai, and Hamon is improper. The arguments set forth in the Appeal Brief and Reply Brief appear to be substantially the same as those in related Appeal 2013-1728 ("the '1728 Appeal"). Since we have fully addressed these arguments in the decision in the '1728 Appeal ("the '1728 Decision"), rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here, specifically, pages 21-23.

Patent Owner provided evidence of secondary consideration which is the same as in the '1728 Appeal. We fully considered this evidence and found it inadequate to rebut the Examiner's strong case of prima facie obviousness. Rather than repeat our analysis, we refer to the discussion in the '1728 Decision on pages 28-33.

After considering the totality of the evidence, we conclude that the preponderance of the evidence establishes that claims 1, 10, and 16 are obvious in view of Weinke, Sakai, and Hamon. The rejection of claims 1,

10, and 16 is affirmed for the reason described above, those give in the '1728 Decision, and those given by the Examiner. Patent Owner argued that dependent claims 2-4, 6, 9, 11, and 13 are patentable for same unpersuasive arguments as for claim 1 or did not provide separate arguments for their patentability (Appeal Br. 27-29). We therefore affirm the rejection of claims 2-4, 6, 9, 11, and 13 as obvious in view of Weinke, Sakai, and Hamon.

VI. B. Claim 17 and dependent claims

Claim 17 recites that "the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 90 minutes." The Examiner found that Hamon teaches that the addition of an activator or accelerator improves the oxygen absorption ability of an oxygen scavenger, but did not provide a sufficient reason as to why the specific values in claim 17 and dependent claims 5, 15, and 20-23 would be suggested by the combination of Weinke, Sakai, and Hamon (Answer 10). In contrast to GB'853, Hamon does not provide a specific indication of the rate of oxygen removal by the addition of the accelerator. We therefore reverse the rejection of these claims.

## VII. OBVIOUSNESS IN VIEW OF WEINKE, SAKAI, GB '853, HAMON HAYHURST, AND COURTRIGHT

Claim 7 is directed to the package of claim 1, where the "oxygen scavenger includes an oxygen-absorbing material integrated into the material used to form said partition member." The Examiner found that Hayhurst and Courtright describe "the provision of an oxygen scavenger for food

packaging incorporated in or as part of, the polymeric material forming the outer package." (Answer 7). Based on these teachings, the Examiner concluded:

> It would have been obvious to one of ordinary skill in the art to utilize polymeric material including an oxygen scavenger therein as disclosed in either Hayhurst or Courtright for the outer container of the combination above because it would minimize handling by eliminating the need to add a separate oxygen scavenging packet.

(Answer 7.)

The Examiner's reasoning is fact-based and supported by a preponderance of the evidence. Patent Owner has not identified a deficiency in it, and we find none. As indicated above, the evidence of secondary consideration is insufficient to rebut the strong case of obviousness. We therefore affirm Rejections 3 and 4 of claim 7 for the reasons set forth by the Examiner (*id.*).

TIME PERIOD FOR RESPONSE

Requests for extensions of time in this ex parte reexamination proceeding are governed by 37 C.F.R. § 1.550(c). See 37 C.F.R. § 41.50(f).

AFFIRMED

alw

Appeal 2013-003338
Reexamination Control 90/011,131
Patent 5,948,457

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PACTIV LLC
Patent Owner and Appellant

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Appeal 2013-003324
Reexamination Control 90/011,130
Patent U.S. 5,811,142
Technology Center 3900

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Before LORA M. GREEN, RICHARD M. LEBOVITZ, and JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal by Patent Owner Pactiv LLC, from the Patent Examiner's rejections of claims 1-15 and 21 in this *ex parte* reexamination proceeding. The Board's jurisdiction for this appeal is under 35 U.S.C. §§ 6(b) and 306. We affirm.

## I. STATEMENT OF CASE

This appeal involves US 5,811,142 ("the '142 patent") which issued September 22, 1998. The named inventors are Gary R. DelDuca, Alan E. Deyo, Vinod K. Luthra, and Wen P. Wu.

A Request for *Ex Parte* Reexamination of the '142 patent was made by a third-party requester, Multisorb Technologies, on August 3, 2010. Reexamination of the '250 patent was subsequently ordered (Order Granting Request for Reexamination, December 2, 2010). An oral hearing was held April 10, 2013. A transcript was into the record on July 23, 2013.

The real party in interest in this *ex parte* reexamination proceeding is the patent owner, Pactiv LLC (Appeal Br. 2, dated February 28, 2012). Patent Owner states that it is involved in litigation against Multisorb in Civil Action No. 10-cv-07609 (Pactiv Corporation v. Multisorb Technologies, Inc.) in the United States District Court, Northern District of Illinois in which U.S. Patent Nos. 6,183,790, 5,698,250, 5,948,457, 5,811,142, 6,231,905, 6,315,921 and 6,395,195 have been asserted.

The present reexamination proceeding is related to the following *ex parte* reexaminations:

(1) Control No. 90/011,128 (US 6,183,790) (Appeal 2013-002087).

(2) Control No. 90/011,131 (US 5,948,457) (Appeal 2013-003338).

(3) Control No. 90/010,976 (US 5,698,250) (Appeal 2013-001728).

(4) Control No. 90/011,132 (US 6,231,905) (Appeal 2013-003339).

(5) Control No. 90/011,596 (US 6,315,921).

(6) Control No. 90/011,597 (US 6,395,195).

Reexaminations (1) to (4) are decided concurrently with this appeal.

## II. REJECTIONS

Claims 1-15 and 21 are pending (Appeal Br. 3). Claims 1-15 are original claims and claim 21 was added in the Response to Ex Parte Reexamination Communication of December 2, 2010, which was filed with the PTO on January 31, 2011 (*id.* at 2). Claims 1, 9, and 10 are the independent claims and were amended during the reexamination proceeding (*id.*). Patent Owner appeals the Examiner's decision to reject the claims. The claims stand rejected by the Examiner as follows:

1. Claims 1-15 and 21 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,574,642 to Weinke ("Weinke") in view of JP 58-158129 to Sakai[1] ("Sakai") and GB 1,556,853 ("GB '853").

2. Claims 1-15 and 21 under 35 U.S.C. § 103(a) as obvious over Weinke in view of Sakai and EP 468,880 to Hamon[2] ("Hamon").

## III. REPRESENTATIVE CLAIMS

Claims 1 and 10 are representative and read as follows (underlining and brackets delineating added and removed subject matter, respectively relative to the originally issued claim):

1. A modified atmosphere package, comprising:

> a first package configured and sized to substantially totally enclose a retail cut of raw meat and including a non-barrier portion substantially permeable to oxygen;
>
> a second package covering said first package and being substantially impermeable to oxygen, said second package creating a pocket between said first package and said second

[1] Citations to English Translation of Record.
[2] Citations to English Translation of Record.

package, said pocket being substantially free of oxygen solely in response to said pocket being flushed with one or more gases creating a modified atmosphere within said pocket, said second package including a polymeric bag; and

an oxygen scavenger positioned external to said first package to substantially absorb residual oxygen within said pocket, said oxygen scavenger being activated with [an] a predetermined amount of oxygen uptake accelerator.

10. A method of manufacturing a modified atmosphere package, said method comprising the steps of:

supplying a first package including a non-barrier portion substantially permeable to oxygen;

placing a retail cut of raw meat within said first package;

sealing said first package;

supplying a second package substantially impermeable to oxygen;

covering said first package with said second package without sealing said second package so as to create a pocket between said first package and said second package;

substantially removing oxygen from said pocket solely by flushing said pocket with one or more gases;

supplying an oxygen scavenger positioned external to said first package to absorb residual oxygen within the pocket;

activating said oxygen scavenger with [an] a predetermined amount of oxygen scavenger accelerator, the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 90 minutes; and

sealing said second package.

## IV. SNQ ISSUE

In the Reply Brief, Patent Owner newly cites the Federal Circuit decision *Belkin Int'l Inc. v. Kappos*, 696 F.3d 1379 (Fed. Cir. 2012) which issued on October 2, 2012, after their Appeal Brief was filed on February 28, 2012. According to Patent Owner, *Belkin* affirmed the Board's decision not

to consider any references that the Director had decided did not form a substantial new question (SNQ) of patentability and they should not be considered here (Reply Br. 2). We addressed this SNQ issue in the related Appeal 2013-1728 ("the '1728 Appeal"). Since we have fully addressed these arguments in the decision in the '1728 Appeal ("the '1728 Decision"), rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here.

## V. REJECTIONS 1 & 2 OF CLAIMS 1, 2, 3, and 6-9

Claim 1 is directed to a modified atmosphere package comprising an "oxygen scavenger being activated with a predetermined amount of oxygen uptake accelerator." Claims 2, 3, and 6-8 are dependent on claim 1. Independent claim 9 is also directed to a modified atmosphere package comprising an "oxygen scavenger means" and an "oxygen scavenger accelerator.

### V.A. Rejection 1: Weinke, Sakai, and GB '853

The Examiner found that Weinke describes a packaging system and a method of manufacturing one as recited in claims 1 and 9, but not comprising an oxygen scavenger and oxygen scavenger accelerator. The Examiner cited Sakai for its teaching of "a method of preserving raw meat by sealing the meat in a gas impermeable container with an oxygen scavenger capable of reducing the oxygen concentration within the container to 5% or less within 24 hours and preferably to 0.1 % or less in 12 hours." (Answer 5; Sakai, p. 4, ll. 7-10 ("The present invention requires as its element to reduce oxygen concentration in the container to 5 % or less

within a specified interval of time, i.e., within 24 hours, preferably to 0.1 % or less within 12 hours, after closely-sealing the meat together with the deoxidizers.").)

For the "oxygen scavenger accelerator," the Examiner cited GB '853 which "teaches that utilization of the mediator/activator provides 5 to 10 times better absorption ability." (Answer 6; GB '853, p. 1, col. 55-60 ("Surprisingly, we have found that the agent according to the present invention, in comparison with the mixture described in J. Clin. Microbiol., possesses a 5 to 10 times better oxygen absorption ability.").) The Examiner concluded:

> It would have been obvious to one of ordinary skill in the art to include an oxygen scavenger as taught in Sakai between the inner and outer containers of Weinke with the enhanced utilization of the activation means taught in GB '853 because it would enhance the protection provided by the inert gas flushing of Weinke by absorbing any residual oxygen present with the enhanced action of the scavenger preventing the onslaught of oxidative deterioration of the meat.

(Answer 6.)

On pages 11-16 of the Appeal Brief and pages 6-10 of the Reply Brief, Patent Owner argues that the combination of Weinke, Sakai, and GB '853 is improper. The arguments set forth in the Appeal Brief and Reply Brief appear to be substantially the same as those in the related '1728 Appeal". Since we have fully addressed these arguments in the decision in the '1728 Appeal, rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here, specifically, pages 9-21.

V.B. Rejection 2: Weinke, Sakai, and Hamon

The Examiner applied the same rationale for rejecting claims 1, 2, 3, and 6-9 over Weinke and Sakai as in Rejection 1 (Answer 7-8). The Examiner further found that Hamon describes optimizing the activity of an oxygen scavenger with an activator (*id.* at 8). Based on Hamon's teaching, the Examiner concluded:

> It would have been obvious to one of ordinary skill in the art to include an oxygen scavenger as taught in Sakai between the inner and outer containers of Weinke with the enhanced configuration for activation as taught in Hamon because it would enhance the protection provided by the inert gas flushing of Weinke by absorbing any residual oxygen present with the enhanced action of the scavenger preventing the onslaught of oxidative deterioration of the meat.

(*Id.* at 7-8.)

On pages 16-18 of the Appeal Brief and page 11 of the Reply Brief, Patent Owner argues that the combination of Weinke, Sakai, and Hamon is improper. The arguments set forth in the Appeal Brief and Reply Brief appear to be substantially the same as those in the '1728 Appeal. Since we have fully addressed these arguments in the decision in the '1728 Appeal ("the '1728 Decision"), rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here, specifically, pages 21-23.

V.C. Secondary considerations

In making an obviousness determination, secondary considerations must be considered if present. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17-18 (1966); *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333, 1343

(Fed. Cir. 2010). Evidence rebutting a prima face case of obviousness can include evidence of secondary considerations, such as commercial success, long-felt but unresolved needs, and unexpected results. *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999); *In re Soni*, 54 F.3d 746, 750-51 (Fed. Cir. 1995). "When a patent applicant puts forth rebuttal evidence, the Board must consider that evidence." *In re Sullivan*, 498 F.3d 1345, 1351 (Fed. Cir. 2007).

Patent Owner provided evidence of secondary consideration which is the same as in the '1728 Appeal. We fully considered this evidence and found it inadequate to rebut the Examiner's strong case of prima facie obviousness. Rather than repeat our analysis, we refer to the discussion in the '1728 Decision on pages 28-33.

V.D. Summary

After considering the totality of the evidence, we conclude that the preponderance of the evidence establishes that claims 1 and 9 are obvious in view of Weinke, Sakai, and GB '853; and Weinke, Sakai, and Hamon. The rejections of claims 1 and 9 are affirmed for the reason described above, those in the '1728 Decision, and those given by the Examiner. Patent Owner argued that dependent claims 2, 3, and 6-8 are patentable for same unpersuasive arguments as for claim 1 or did not provide separate arguments for their patentability (Appeal Br. 25). We therefore affirm the rejection of claims 2, 3, and 6-8 as obvious in view of Weinke, Sakai, and GB '853; and Weinke, Sakai, and Hamon.

VI. REJECTIONS 1 AND 2 OF CLAIMS 5, 10, 11, 12, 14, 15, and 21

Claim 10 is directed to a method of manufacturing a modified atmosphere package comprising a step of "activating said oxygen scavenger with a predetermined amount of oxygen scavenger accelerator, the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 90 minutes." Claims 11, 12, 14, 15, and 21 depend on claim 10.

Claim 5 depends on claims 1 and 4 and recites the same limitation as claim 10.

VI.A. Rejection 1: Weinke, Sakai, and GB '853

Patent Owner contends "there is no disclosure, teaching or suggestion that the proposed combination of Weinke, Sakai and GB '853 would obtain the claimed activity levels" recited in claims 5, 10 and others (Appeal Br. 23). Patent Owner argues that the scavenger in Sakai worked poorly and the "process in GB '853 uses an anaerobic vessel so work required by the oxygen absorbing agent is very minimal to reach the desired oxygen content." (*Id.* at 23-24.) Patent Owner also states that "it is not clear whether the oxygen scavenger system of GB '853, which works for a few minutes in an anaerobic container, would work as claimed in the poorly performing system of Sakai." (*Id.* at 24.)

Patent Owner cites testimony by Mr. DelDuca to support this position. *See* Third DelDuca Decl. ¶ 16. Mr. DelDuca is a co-inventor of the '142 patent. From 1995, Mr. DelDuca was Technical Manager and/or Technical Sales Manager for the Patent Owner in the area of modified atmosphere

packaging (MAP) for meats (First DelDuca Decl. ¶ 2). His responsibilities have included designing, developing, and implementing such modified atmosphere packaging for meat and processes using the same (*id.*). Mr. DelDuca worked in the field of the claimed invention and thus possesses the requisite knowledge expected of one of ordinary skill in the art. Consequently, we conclude that Mr. DelDuca is qualified to testify as to the matters in his declaration.

Mr. DelDuca did not provide evidence that the system in GB '853 would not work in a meat package. The PTO does not have the facilities to perform testing. Consequently, all an Examiner can do is to provide a reasonable basis upon which to believe that prior art would perform as claimed, shifting the burden to patent owner to show that it would not. In this case, the specific teachings in GB '853 about the efficacy of its system are adequate to provide the Examiner with a reasonable basis to believe it would work in Weinke and Sakai's meat packing systems, shifting the burden to Patent Owner to show otherwise. These teachings include:

> Surprisingly, we have found that the agent according to the present invention, in comparison with the mixture described in J. Clin. Microbiol., possesses a 5 to 10 times better oxygen absorption ability, referred to the amount of iron.

(GB '853, p. 1, ll. 55-60.)

> For the production of an oxygen-poor or oxygen-free atmosphere, such as is necessary, for example, for culturing anaerobic bacteria, the dry mixture according to the present invention is brought into contact with a reaction mediator.

(GB '853, p. 2, ll. 18-23.)

> After only a few minutes [using a mixture comprising iron powder as an oxygen absorbing agent and citric acid as an

> activator], a practically oxygen-free atmosphere is produced in the anaerobic vessel.

(GB '853, p. 2, ll. 43-56; p. 1, ll. 69-81).

Patent Owner did not provide adequate rebuttal arguments or evidence. Mr. DelDuca made the statement that there is no "evidence" that GB '853 would achieve the claimed activity levels. But we do not agree. To the contrary, the evidence cited above, provides an adequate basis that an oxygen-free or a practically oxygen-free atmosphere could be accomplished in "only a few minutes", which overlaps with the claimed value of "the activated oxygen scavenger lowers the oxygen level in said package to less than about 0.05 percent in less than about 90 minutes." (Claim 10.)

Mr. DelDuca appeared to imply that the system in GB '853 work[ed] for only a few minutes (Third DelDuca ¶ 16), but there is no indication that the mixture in the GB '853 system depleted the container of oxygen and then stopped working. Mr. DelDuca also did not provide evidence, or a reason with factual underpinnings, as to why a system that worked in anaerobic culture container would not work as well in a sealed meat packaging system. His opinion was that GB '853 would not work in Weinke, but he did not provide a factual basis or reason for holding this opinion. We credit his opinion little weight in light of the explicit disclosure to the contrary in Sakai that oxygen scavengers worked in meat packaging systems. Consequently, we do not find Patent Owner's arguments persuasive as to claims 5, 10, and dependent claims 11-15, and 24.

Patent Owner provided evidence of secondary consideration which is the same as in the '1728 Appeal. We fully considered this evidence and found it inadequate to rebut the Examiner's strong case of prima facie

obviousness. Rather than repeat our analysis, we refer to the discussion in the '1728 Decision on pages 28-33.

After considering the totality of the evidence, including the arguments regarding dependent claims (App. Br. 27-29), we conclude that the preponderance of the evidence establishes that claims 5, 10, 11, 12, 14, 15, and 21 are obvious in view of Weinke, Sakai, and GB '853. The rejection of claims 5, 10, 11, 12, 14, 15, and 21 is affirmed for the reason described above, those in '1728 Decision, and those given by the Examiner.

### VI.B. Rejection 2: Weinke, Sakai, and Hamon

The Examiner found that Hamon teaches that the addition of an activator or accelerator improves the oxygen absorption ability of an oxygen scavenger, but did not provide a sufficient reason as to why the specific values in claims 5 and 10 and would be suggested by the combination of Weinke, Sakai, and Hamon (Answer 8). In contrast to GB'853, Hamon does not provide a specific indication of the rate of oxygen removal by the addition of the accelerator. We therefore reverse the rejection of claims 5 and 10, and dependent claims 11, 12, 14, 15, and 21, as obvious in view of Weinke, Sakai, and Hamon.

## VII. REJECTIONS 1 AND 2 OF CLAIMS 4 and 13

Claim 4 depends on claim 1 and recites that the "oxygen scavenger is constructed to reduce a level of said residual oxygen at a rate sufficient to prevent discoloration of said raw meat." Claim 13 depends on claim 10 and recites the same limitation.

Patent Owner contends that claims 4 and 13 are separately patentable. Mr. DelDuca testifies that the "present invention is especially desirable in its ability to obtain consistent blooming color with retail cuts of pigment-sensitive raw meats (e.g., round bone)." (First DelDuca Decl. ¶ 7.) Mr. DelDuca testifies that "certain cuts of raw meat have color that can be unstable (i.e., the pigment of the raw meats tend to quickly form metmyoglobin (brown color)) when exposed to low levels of oxygen." (*Id.*) According to Patent Owner, "[b]y reducing the residual oxygen at a rate sufficient to prevent discoloration of the raw meat, the [oxygen scavenger] prevents discoloration of the raw meat and allows the raw meat to be a saleable product." (Appeal Br. 26.) Patent Owner contends that there would be no expectation from the combination of cited prior art that residual oxygen could be reduced to prevent discoloration of the meat (*id.*)

This argument does not persuade us that the Examiner erred. Sakai, which is cited in both rejections, acknowledges the problem of meat discoloration in the prior art, but explicitly states:

> The inventors of the present invention and others had conducted the study on a method for closely-sealing meat together with deoxidizers to prevent the meat from discoloration. As a result, it was discovered that the reduction of oxygen concentration in the [sealed] container to a specific value within a specific interval of time [after sealing] made it possible to recreate the red color of meat as a fresh one after opening the container.

(Sakai, p. 2, ll. 24-29.)

Thus, Sakai provides express evidence that one of ordinary skill in the art would have reasonably expected that an oxygen scavenger could prevent meat discoloration. Patent Owner attempts to discredit Sakai but identifying apparent discrepancies in its disclosure ('1728 Decision, pp. 13-18). We

acknowledge these inconsistencies, but find that Sakai's explicit statements that its deoxidizers work to prevent meat discoloration and promote blooming outweigh any conflicting data. In addition to the passage reproduced above, Sakai teaches:

> According to the present invention, meat is closely-sealed together with deoxidizers, and it is, therefore, possible to make the meat have a freshly reddish tinge caused by oxymyoglobin quickly as soon as the packaging container is opened.

(Page 2, lines 5-9).

> Next, as for the color of the meat after opening the package, Example 1 [with deoxidizer] recovered a fresh red color, while Comparative Examples showed little recovery of their colors and remained brownish.

(Page 6, ll. 17-19).

In addition, Sakai's statements are not without support. Sakai compared the effect deoxidizers on oxygen concentration, metmyoglobin content, and color of stored meat (Sakai, pp. 5-7). Color is indicated by the a-value, where the higher the a-value the redder the meat sample (Reply Br. 6-7). After ten days, Example 1 with deoxidizer shows a package with less than 0.1% oxygen, metmyoglobin content of 30.1%, and an a-value of 7.7, while Comparative Example 2 without deoxidizer shows a higher concentration of oxygen at 1.5%, a higher content of metmyoglobin at 78.4%, and a lower a-value of 4.9 (Sakai, p. 6, Table I). Thus, even if Comparative Example 1 is discrepant as testified by Dr. Hunt[3] (*see* '1728

[3] In support of their non-obviousness arguments, Patent Owner provided written testimony by Melvin C. Hunt, Ph.D. Dr. Hunt has a Ph.D. in Food Science, and testified that he has "performed numerous research projects in Meat Science and Muscle Biology including major emphasis on pigment

Decision, pp. 14-15), there is still support for Sakai's conclusion about the benefit of deoxidizers and the statement that deoxidizers make it "made it possible to recreate the red color of meat as a fresh one after opening the container." (Sakai, p. 2, ll. 23-29.)

Patent Owner provided evidence of secondary consideration which is the same as in the '1728 Appeal. We fully considered this evidence and found it inadequate to rebut the Examiner's strong case of prima facie obviousness. Rather than repeat our analysis, we refer to the discussion in the '1728 Decision on pages 28-33

After considering the totality of the evidence, including the arguments regarding dependent claims (App. Br. 27-29), we conclude that the preponderance of the evidence establishes that claim 4 and 13 are obvious in view of Weinke, Sakai, and GB '853 and Weinke, Sakai, Hamon. The rejection of claims 34 and 13 is affirmed for the reason described above, those of the '1728 Decision, and those given by the Examiner.

TIME PERIOD FOR RESPONSE

Requests for extensions of time in this *ex parte* reexamination proceeding are governed by 37 C.F.R. § 1.550(c). *See* 37 C.F.R. § 41.50(f).

AFFIRMED

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chemistry, meat color, meat packaging, and factors effecting microbial soundness." (Hunt Decl. ¶ 1 & 2.) See '1728 Decision, p. 13, ll. 4-7.

Appeal 2013-003324
Reexamination Control 90/011,130
Patent 5,811,142

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PACTIV LLC
Patent Owner and Appellant

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Appeal 2013-002087
Reexamination Control 90/011,128
Patent U.S. 6,183,790 B1
Technology Center 3900

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Before LORA M. GREEN, RICHARD M. LEBOVITZ, and JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal by Patent Owner Pactiv LLC, from the Patent Examiner's rejections of claims 1-7, 9, and 10 in this *ex parte* reexamination proceeding. The Board's jurisdiction for this appeal is under 35 U.S.C. §§ 6(b) and 306. We affirm.

## I. STATEMENT OF CASE

This appeal involves US 6,183,790 ("the '790 patent") which issued February 6, 2001. The named inventors are Gary R. DelDuca, Alan E. Deyo, Vinod K. Luthra, and Wen P. Wu.

A Request for *Ex Parte* Reexamination of the '790 patent was made by a third-party requester, Multisorb Technologies, on August 2, 2010. Reexamination of the '790 patent was subsequently ordered (Order Granting Request for Reexamination, November 4, 2010). An oral hearing was held April 10, 2013. A transcript was into the record on July 23, 2013.

The real party in interest in this *ex parte* reexamination proceeding is the patent owner, Pactiv LLC (Appeal Br. 2, dated February 28, 2012). Patent Owner states that it is involved in litigation against Multisorb in Civil Action No. 10-cv-07609 (Pactiv Corporation v. Multisorb Technologies, Inc.) in the United States District Court, Northern District of Illinois in which U.S. Patent Nos. 6,183,790, 5,698,250, 5,948,457, 5,811,142, 6,231,905, 6,315,921 and 6,395,195 have been asserted.

The present reexamination proceeding is related to the following *ex parte* reexaminations:

(1) Control No. 90/010,976 (US 5,698,250) (Appeal 2013-001728).

(2) Control No. 90/011,131 (US 5,948,457) (Appeal 2013-003338).

(3) Control No. 90/011,130 (US 5,811,142) (Appeal 2013-003324).

(4) Control No. 90/011,132 (US 6,231,905) (Appeal 2013-003339).

(5) Control No. 90/011,596 (US 6,315,921).

(6) Control No. 90/011,597 (US 6,395,195).

Reexaminations (1) to (4) are decided concurrently with this appeal.

The technology in the '250 patent involves packaging for meat. The '250 patent teaches that "[p]ackaging systems which provide extremely low levels of oxygen are generally preferable because it is well known that the fresh quality of meat can be preserved longer under anaerobic conditions than under aerobic conditions." (Col. 1, ll. 36-39.) The '250 patent describes prior art systems in which the atmosphere is evacuated of oxygen and optionally filled with gases other than oxygen to preserve the meat (col. 1, ll. 40-61). "The meat in the modified atmosphere package takes on a less desirable purple-red color which few consumers would associate with freshness. This purple-red color, however, quickly 'blooms' to a bright red color generally associated with freshness when the package is opened to oxygenate the fresh meat by exposure to air." (Col. 1, ll. 61-66.) The '250 patent describes the invention as a packaging system which comprises an oxygen scavenger to substantially absorb residual oxygen in the package that remains after the package is flushed with gases to substantially eliminate the oxygen in the package atmosphere (col. 2, ll. 36-56). The claims are drawn to packaging systems, and methods of making them, comprising an **oxygen scavenger** and also a predetermined amount of an **activator** to increase the rate of oxygen absorption (claims 1, 12, 21, 23; col. 4, ll. 35-39). As explained in the patent, the retail meat is stored in the package, and just prior to display at the grocery store to the consumer, the package is opened and the meat exposed to air (col. 2, ll. 31-33; col. 4, ll. 55-58). The meat is oxygenated and quickly changes or "blooms" to a bright red color (*id.*).

## II. REJECTIONS

Claims 1-7, 9, and 10 are original claims and pending in this appeal (Appeal Br. 3). Claims 1 and 10 are the only independent claims on appeal and were amended "in the Response to Final Office Action in Ex Parte Reexamination Mailed September 28, 2011, which was filed with the PTO on November 22, 2011" (*id.* at 2).

Patent Owner appeals the Examiner's decision to reject the claims. The claims stand rejected by the Examiner as follows:

1. Claims 1, 3-6, 9 and 10 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,574,642 to Weinke ("Weinke") in view of JP 58-158129 to Sakai[1] ("Sakai") and GB 1,556,853 ("GB '853").

2. Claims 1, 3-6, 9 and 10 under 35 U.S.C. § 103(a) as obvious over Weinke in view of Sakai and EP 468,880 to Hamon[2] ("Hamon").

3. Claim 2 under 35 U.S.C. § 103(a) as obvious over Weinke in view of Sakai, GB '853 and U.S. Patent No. 4,339,161 to Nakamura ("Nakamura").

4. Claim 2 under 35 U.S.C. § 103(a) as obvious over Weinke in view of Sakai, Hamon and Nakamura.

5. Claim 7 under 35 U.S.C. § 103(a) as obvious over Weinke in view of Sakai, GB '853 and U.S. Patent No. 5,064,698 to Courtright ("Courtright").

6. Claim 7 is unpatentable under 35 U.S.C. § 103(a) as obvious over Weinke in view of Sakai, Hamon and Courtright.

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[1] Citations to English Translation of Record.
[2] Citations to English Translation of Record.

## III. REPRESENTATIVE CLAIM

Claim 1 is representative and reads as follows (underlining and brackets delineating added and removed subject matter, respectively relative to the originally issued claim):

> 1. A modified atmosphere package comprising
>
> first and second compartments separated by a partition member, said partition member including a non-barrier portion substantially permeable to oxygen, said first and second compartments being encompassed by an outer wall substantially impermeable to oxygen, said outer wall includes a plastic bag, an oxygen scavenger activated with a predetermined amount of oxygen scavenger accelerator and positioned to absorb oxygen in said first compartment, said second compartment containing a retail cut of raw meat.

## IV. SNQ ISSUE

In the Reply Brief, Patent Owner newly cites the Federal Circuit decision *Belkin Int'l Inc. v. Kappos*, 696 F.3d 1379 (Fed. Cir. 2012) which issued on October 2, 2012, after their Appeal Brief was filed on February 28, 2012. According to Patent Owner, *Belkin* affirmed the Board's decision not to consider any references that the Director had decided did not form a substantial new question (SNQ) of patentability and they should not be considered here (Reply Br. 2). We addressed this SNQ issue in the related Appeal 2013-1728 ("the '1728 Appeal"). Since we have fully addressed these arguments in the decision in the '1728 Appeal ("the '1728 Decision"), rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here.

## V. REJECTIONS 1, 3, AND 5 BASED ON WEINKE, SAKAI, AND GB '853

Claims 1 and 10 are the only independent claims. Claim 1 is directed to a modified atmosphere package containing raw meat, comprising "an oxygen scavenger activated with a predetermined amount of oxygen scavenger accelerator." Claim 10 is also directed to a modified atmosphere package comprising an oxygen scavenger and oxygen scavenger accelerator.

The Examiner found that Weinke describes a package for meats, but not comprising an oxygen scavenger and oxygen scavenger accelerator as claimed (Answer 4). For the latter components, the Examiner cited Sakai and GB '853, respectively (*id.* at 5-6). The Examiner concluded:

> It would have been obvious to one of ordinary skill in the art to include an oxygen scavenger as taught in Sakai between the inner and outer containers of Weinke with the enhanced utilization of the activation means taught in GB '853 because it would enhance the protection provided by the inert gas flushing of Weinke by absorbing any residual oxygen present with the enhanced action of the scavenger preventing the onslaught of oxidative deterioration of the meat.

(*Id.* at 6.)

On pages 10-15 of the Appeal Brief and pages 5-10 of the Reply Brief, Patent Owner argues that the combination of Weinke, Sakai, and GB '853 is improper. The arguments set forth in the Appeal Brief and Reply Brief appear to be substantially the same as those in Appeal 2013-001728 ("the '1728 Appeal"). Since we have fully addressed these arguments in the decision in the '1728 Appeal, rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here, specifically, pages 9-21. For those reasons, we

conclude that the Examiner has provided sufficient evidence to establish that claims 1 and 10 are prima facie obvious in view of Weinke, Sakai, and GB '853. Patent Owner relied on the same arguments for claim 1, as for dependent claims 2-7 and 9 (Appeal Br. 22), and thus we find a prima facie case of obviousness has been established for claims 2-7 and 9 the same reasons as for claim 1.

## VI. REJECTIONS 2, 4, AND 6 BASED ON WEINKE, SAKAI, AND HAMON

The Examiner applied the same rationale for combining Weinke and Sakai as for Rejection 1 (Answer 8). The Examiner further found that Hamon describes an oxygen reducing agent ("oxygen scavenger") and an activation chemical ("oxygen scavenger accelerator") for enhancing the activity of the oxygen reducing agent (*id.* at 9). Based on these teachings, the Examiner concluded:

> It would have been obvious to one of ordinary skill in the art to include an oxygen scavenger as taught in Sakai between the inner and outer containers of Weinke with the enhanced configuration for activation as taught in Hamon because it would enhance the protection provided by the inert gas flushing of Weinke by absorbing any residual oxygen present with the enhanced action of the scavenger preventing the onslaught of oxidative deterioration of the meat.

(*Id.*)

On pages 15-17 of the Appeal Brief and pages 10-11 of the Reply Brief, Patent Owner argues that the combination of Weinke, Sakai, and Hamon is improper. The arguments set forth in the Appeal Brief and Reply Brief appear to be substantially the same as those in the '1728 Appeal.

Since we have fully addressed these arguments in the decision in the '1728 Appeal ("the '1728 Decision"), rather than repeat the reasoning again as to why we found the arguments unpersuasive, we incorporate by reference that part of the decision here, specifically, pages 21-23.

For those reasons, we conclude that the Examiner has provided sufficient evidence to establish that claims 1 and 10 are prima facie obvious in view of Weinke, Sakai, and Hamon. Patent Owner relied on the same arguments for claim 1, as for dependent claims 2-7 and 9 (Appeal Br. 22), and thus we find a prima facie case of obviousness has been established for 2-7 and 9 for the same reasons as for claim 1.

## VII. SECONDARY CONSIDERATIONS

In making an obviousness determination, secondary considerations must be considered if present. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17-18 (1966); *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333, 1343 (Fed. Cir. 2010). Evidence rebutting a prima face case of obviousness can include evidence of secondary considerations, such as commercial success, long-felt but unresolved needs, and unexpected results. *WMS Gaming, Inc. v. Int'l Game Tech.,* 184 F.3d 1339, 1359 (Fed. Cir. 1999); *In re Soni*, 54 F.3d 746, 750-51 (Fed. Cir. 1995). "When a patent applicant puts forth rebuttal evidence, the Board must consider that evidence." *In re Sullivan*, 498 F.3d 1345, 1351 (Fed. Cir. 2007).

The evidence of secondary considerations put forth in this appeal is the same as in the '1728 Appeal. We fully considered this evidence and found it inadequate to rebut the Examiner's strong case of prima facie

obviousness. Rather than repeat our analysis, we refer to the discussion in the '1728 Decision on pages 28-33.

After considering the totality of the evidence, we conclude that the preponderance of the evidence establishes that claims 1 and 10, and dependent claims 2-7 and 9, are obvious in view of Weinke, Sakai, and GB '853; Weinke, Sakai, and Hamon; and the additionally cited publications cited in Rejections 3-6. Rejections 1-6 of claims 1-7, 9, and 10 are affirmed for the reasons described above, in the '1728 Decision, and those given by the Examiner.

TIME PERIOD FOR RESPONSE

Requests for extensions of time in this ex parte reexamination proceeding are governed by 37 C.F.R. § 1.550(c). See 37 C.F.R. § 41.50(f).

AFFIRMED

alw

Appeal 2013-002087
Reexamination Control 90/011,128
Patent 6,183,790 B1

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# United States Court of Appeals
# for the Federal Circuit

*In re: Pactiv LLC,* 2014-1066, -1067, 1068, -1069, -1070

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I, Robyn Cocho, being duly sworn according to law and being over the age of 18, upon my oath depose and say that:

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February 4, 2014

/s/ Robyn Cocho
Robyn Cocho
Counsel Press

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February 4, 2014

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